

PUBLIC NOTICE
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY (LDEQ)
CECOS INTERNATIONAL, INC. - WESTLAKE FACILITY
FINAL HAZARDOUS WASTE POST-CLOSURE PERMIT

The LDEQ, Office of Environmental Services, has made the decision to issue the final hazardous waste post-closure permit for CECOS International, Inc., P.O. Box 1849, Sulphur, Louisiana 70664 for the Westlake Facility - Closed Areas. **The facility is located at 918 Willow Springs Road, Westlake, Calcasieu Parish.**

Under this final hazardous waste post-closure permit, CECOS International, Inc. will conduct post-closure care, maintenance, monitoring and corrective action under the corrective action program for all closed units which includes landfill cells, surface impoundments and basins.

The final permitting action and related documents are available for review and copying (all documents copied will be subject to a \$0.25 charge per copied page) at the LDEQ, Public Records Center, Room 127, 602 North 5th Street, Baton Rouge, LA. Viewing hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday (except holidays). **The available information can also be accessed electronically on the Electronic Document Management System (EDMS) on the DEQ public website at www.deq.louisiana.gov.**

Additional copies of this action may be reviewed at the Calcasieu Parish Library, Westlake Branch, 937 Mulberry Street, Westlake, LA 70669 and the Sulphur Regional Branch, 1160 Cypress Street, Sulphur, LA 70663.

In accordance with Louisiana Revised Statutes (La R.S.) 30:2024, the Permittee may file with the secretary a request for a hearing no later than thirty (30) days after the notice of the action is served. Under La. R.S. 30:2050.21, any person aggrieved by a final permit action may appeal to the Nineteenth Judicial District Court within 30 days after the notice of the action has been given.

Previous public notices were published in The Advocate and The American Press on January 16, 2008, July 17, 2008 and October 3, 2008.

Inquiries or requests for additional information regarding this permit action, should be directed to Karla Vidrine, LDEQ, Waste Permits Division, P.O. Box 4313, Baton Rouge, LA 70821-4313, phone (225) 219-3061.

Persons wishing to be included on the LDEQ permit public notice mailing list or for other public participation related questions should contact the Public Participation Group in writing at LDEQ, P.O. Box 4313, Baton Rouge, LA 70821-4313, by email at deqmaillistrequest@la.gov or contact the LDEQ Customer Service Center at (225) 219-LDEQ (219-5337).

Permit public notices including electronic access to the issued permit and associated information can be viewed at the LDEQ permits public notice webpage at www.deq.louisiana.gov/apps/pubNotice/default.asp and general information related to the public participation in permitting activities can be viewed at www.deq.louisiana.gov/portal/tabid/2198/Default.aspx

Alternatively, individuals may elect to receive the permit public notices via email by subscribing to the LDEQ permits public notice List Server at www.doa.louisiana.gov/oes/listservpage/ldeq_pn_listserv.htm

All correspondence should specify AI Number 276, Permit Number LAD 000 618 256, and Activity Number PER20020003.

Scheduled Publication Date: December 29, 2008

PUBLIC NOTICE

PUBLIC NOTICE
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY (LDEQ)
CECOS INTERNATIONAL, INC. - WESTLAKE FACILITY
FINAL HAZARDOUS WASTE POST-CLOSURE PERMIT

The LDEQ, Office of Environmental Services, has made the decision to issue the final hazardous waste post-closure permit for CECOS International, Inc., P.O. Box 1849, Sulphur, Louisiana 70664 for the Westlake Facility - Closed Areas. **The facility is located at 918 Willow Springs Road, Westlake, Calcasieu Parish.**

Under this final hazardous waste post-closure permit, CECOS International, Inc. will conduct post-closure care, maintenance, monitoring and corrective action under the corrective action program for all closed units which includes landfill cells, surface impoundments and basins.

The final permitting action and related documents are available for review and copying (all documents copied will be subject to a \$0.25 charge per copied page) at the LDEQ, Public Records Center, Room 127, 602 North 5th Street, Baton Rouge, LA. Viewing hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday (except holidays). **The available information can also be accessed electronically on the Electronic Document Management System (EDMS) on the DEQ public website at www.deq.louisiana.gov.**

Additional copies of this action may be reviewed at the Calcasieu Parish Library, Westlake Branch, 937 Mulberry Street, Westlake, LA 70669 and the Sulphur Regional Branch, 1160 Cypress Street, Sulphur, LA 70663.

In accordance with Louisiana Revised Statutes (La R.S.) 30:2024, the Permittee may file with the secretary a request for a hearing no later than thirty (30) days after the notice of the action is served. Under La. R.S. 30:2050.21, any person aggrieved by a final permit action may appeal to the Nineteenth Judicial District Court within 30 days after the notice of the action has been given.

Previous public notices were published in The Advocate and The American Press on January 16, 2008, July 17, 2008 and October 3, 2008.

Inquiries or requests for additional information regarding this permit action, should be directed to Karla Vidrine, LDEQ, Waste Permits Division, P.O. Box 4313, Baton Rouge, LA 70821-4313, phone (225) 219-3061.

Persons wishing to be included on the LDEQ permit public notice mailing list or for other public participation related questions should contact the Public Participation Group in writing at LDEQ, P.O. Box 4313, Baton Rouge, LA 70821-4313, by email at deqmaillistrequest@la.gov or contact the LDEQ Customer Service Center at (225) 219-LDEQ (219-5337).

Permit public notices including electronic access to the issued permit and associated information can be viewed at the LDEQ permits public notice webpage at www.deq.louisiana.gov/apps/pubNotice/default.asp and general information related to the public participation in permitting activities can be viewed at www.deq.louisiana.gov/portal/tabid/2198/Default.aspx

Alternatively, individuals may elect to receive the permit public notices via email by subscribing to the LDEQ permits public notice List Server at www.doe.louisiana.gov/oes/listservpage/ldeq_pn_listserv.htm

All correspondence should specify AI Number 276, Permit Number LAD 000 618 256, and Activity Number PER20020003.

Scheduled Publication Date: December 29, 2008

SIGNATURE PAGE

FINAL POST-CLOSURE PERMIT

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

CECOS INTERNATIONAL, INC. WESTLAKE FACILITY

PERMITTEE: CECOS INTERNATIONAL, INC.

PERMIT NUMBER: LAD 000 618 256-PC-1
Agency Interest #276
PER #20020003

FACILITY LOCATION: 918 WILLOW SPRINGS ROAD, CALCASIEU PARISH
WESTLAKE, LOUISIANA 70669

This permit is issued by the Louisiana Department of Environmental Quality (LDEQ) under the authority of the Louisiana Hazardous Waste Control Law R.S. 30:2171 et seq., and the regulations adopted thereunder and the 1984 Hazardous and Solid Waste Amendments (HSWA) to the Resource Conservation and Recovery Act (RCRA), to CECOS International, Inc., Westlake Facility, (hereafter called the Permittee), for the closed hazardous waste management units, at the facility located at 918 Willow Springs Road, Westlake, Louisiana, Calcasieu Parish, at latitude 30° 19' 14" and longitude 93° 18' 15".

For the purposes of this permit, the "Administrative Authority" shall be the Secretary of the Louisiana Department of Environmental Quality, or his/her designee.

The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions contained herein and the applicable regulations as specified in the permit. Applicable regulations are those which are in effect on the date of issuance of this permit.

This permit is based on the assumption that the information provided to LDEQ by the Permittee is accurate. Further, this permit is based in part on the provisions of Sections 206, 212, and 224 of HSWA of 1984, which modify Sections 3004 and 3005 of RCRA. In particular, Section 206 requires corrective action for all releases of hazardous waste or constituents from any solid waste management unit at a treatment, storage or disposal facility seeking a permit, regardless of the time at which waste was placed in such unit.

The LDEQ has issued a draft "IT" analysis in the draft permit. No public comments were received on the draft "IT" analysis. The LDEQ hereby adopts the "IT" analysis performed as part of this permit decision.

Section 212 provides authority to review and modify the permit at any time. Any inaccuracies found in the submitted information may be grounds for the termination, modification or revocation and reissuance of this permit (see LAC 33:V.323) and potential enforcement action. The Permittee must inform the LDEQ of any deviation from or changes in the information in the application which would affect the Permittee's ability to comply with the applicable regulations or permit conditions.

This renewed permit shall be effective as of January 29, 2009, and shall remain in effect until January 29, 2019, unless revoked and reissued, modified or terminated in accordance with the LAC 33:V.323 and 705 of the Louisiana Hazardous Waste Regulations. The Administrative Authority may issue any permit for a duration that is less than the maximum term of ten (10) years and the term shall not be extended beyond the maximum duration by modification in accordance with LAC 33:V.315.

The post-closure care period for the permitted units, which are subject to the requirements of LAC 33:V.3519 through 3527, including monitoring and maintenance, will be in effect for at least thirty (30) years, unless extended by the Administrative Authority. The post-closure care period for the permitted units began November 1999. The expiration of this permit does not relieve the Permittee of the responsibility to reapply for a permit for the remainder of the thirty (30) year post-closure care period.

The corrective action which is subject to LAC 33:V.3321 and 3322, must continue until concentration limits for all monitoring parameters listed in this permit have been achieved, or as required by the Administrative Authority.

Provisions of this permit may be appealed in writing pursuant to La. R.S. 30:2024(A) within thirty (30) days from receipt of the permit. Only those provisions specifically appealed will be suspended by a request for hearing, unless the secretary or the assistant secretary elects to suspend other provisions as well. A request for hearing must be sent to the following:

Louisiana Department of Environmental Quality
Office of the Secretary
Attention: Hearing Clerk, Legal Affairs Division
Post Office Box 4302
Baton Rouge, Louisiana 70821-4302



Cheryl Sonnier Nolan, Assistant Secretary
Louisiana Department of Environmental Quality



Date

PART A

SEND COMPLETED FORM TO: The Appropriate State or A Regional Office.	United States Environmental Protection Agency RCRA SUBTITLE C SITE IDENTIFICATION FORM	
1. Reason for Submittal (See instructions on page 14.) MARK ALL BOX(ES) THAT APPLY	Reason for Submittal: <input type="checkbox"/> To provide Initial Notification of Regulated Waste Activity (to obtain an EPA ID Number for hazardous waste, universal waste, or used oil activities) <input type="checkbox"/> To provide Subsequent Notification of Regulated Waste Activity (to update site identification information) <input type="checkbox"/> As a component of a First RCRA Hazardous Waste Part A Permit Application <input checked="" type="checkbox"/> As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment # _____) <input type="checkbox"/> As a component of the Hazardous Waste Report	
2. Site EPA ID Number (page 15)	EPA ID Number L A D 0 0 0 6 1 8 2 5 6	
3. Site Name (page 15)	Name: CECOS International, Inc., Calcasieu Facility	
4. Site Location Information (page 15)	Street Address: 918 Willow Springs Road	
	City, Town, or Village: Westlake	State: Louisiana
	County Name: Calcasieu	Zip Code: 70669
Site Land Type (page 15)	Site Land Type: <input checked="" type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Indian <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other	
6. North American Industry Classification System (NAICS) Code(s) for the Site (page 15)	A. 5 6 2 2 1 1	B. _____
	C. _____	D. _____
7. Site Mailing Address (page 16)	Street or P. O. Box: P.O. Box 1849	
	City, Town, or Village: Sulphur	
	State: Louisiana	
	Country: U.S.A.	Zip Code: 70664
8. Site Contact Person (page 16)	First Name: Oliver	MI:
	Last Name: Ford, Jr.	
9. Operator and Legal Owner of the Site (pages 16 and 17)	Phone Number: (337) 527-6857 Extension: 202	
	Email address: Oliver.Ford@awin.com	
	9. Operator and Legal Owner of the Site A. Name of Site's Operator: BFI Waste Systems of North America, Inc. Date Became Operator (mm/dd/yyyy): 06/01/1979 Operator Type: <input checked="" type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Indian <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other	
	B. Name of Site's Legal Owner: CECOS International, Inc. Date Became Owner (mm/dd/yyyy): 01/01/1986 Owner Type: <input checked="" type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Indian <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other	

9. Legal Owner (Continued) Address	Street or P. O. Box: 18500 North Allied Way	
	City, Town, or Village: Phoenix	
	State: AZ	
	Country: U.S.A.	Zip Code: 85054

10. Type of Regulated Waste Activity

Mark "Yes" or "No" for all activities; complete any additional boxes as instructed. (See instructions on pages 18 to 21.)

A. Hazardous Waste Activities

Complete all parts for 1 through 6.

Y ☒ N ☐ 1. Generator of Hazardous Waste

If "Yes", choose only one of the following - a, b, or c.

☒ a. LQG: Greater than 1,000 kg/mo (2,200 lbs./mo.)
of non-acute hazardous waste; or☐ b. SQG: 100 to 1,000 kg/mo (220 - 2,200 lbs./mo.)
of non-acute hazardous waste; or☐ c. CESQG: Less than 100 kg/mo (220 lbs./mo.)
of non-acute hazardous waste

In addition, indicate other generator activities.

Y ☐ N ☒ d. United States Importer of Hazardous WasteY ☐ N ☒ e. Mixed Waste (hazardous and radioactive) GeneratorY ☐ N ☒ 2. Transporter of Hazardous WasteY ☐ N ☒ 3. Treater, Storer, or Disposer of
Hazardous Waste (at your site) Note:
A hazardous waste permit is required for
this activity.Y ☐ N ☒ 4. Recycler of Hazardous Waste (at your
site)Y ☐ N ☒ 5. Exempt Boiler and/or Industrial
Furnace

If "Yes", mark each that applies.

☐ a. Small Quantity On-site Burner
Exemption☐ b. Smelting, Melting, and Refining
Furnace ExemptionY ☐ N ☒ 6. Underground Injection Control

B. Universal Waste Activities

Y ☐ N ☒ 1. Large Quantity Handler of Universal Waste (accumulate
5,000 kg or more) [refer to your State regulations to
determine what is regulated]. Indicate types of universal
waste generated and/or accumulated at your site. If "Yes",
mark all boxes that apply:

	Generate	Accumulate
a. Batteries	<input type="checkbox"/>	<input type="checkbox"/>
b. Pesticides	<input type="checkbox"/>	<input type="checkbox"/>
c. Thermostats	<input type="checkbox"/>	<input type="checkbox"/>
d. Lamps	<input type="checkbox"/>	<input type="checkbox"/>
e. Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>
f. Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>
g. Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>

Y ☐ N ☒ 2. Destination Facility for Universal Waste

Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities

Mark all boxes that apply.

Y ☐ N ☒ 1. Used Oil Transporter

If "Yes", mark each that applies.

☐ a. Transporter☐ b. Transfer FacilityY ☐ N ☒ 2. Used Oil Processor and/or Re-refiner

If "Yes", mark each that applies.

☐ a. Processor☐ b. Re-refinerY ☐ N ☒ 3. Off-Specification Used Oil BurnerY ☐ N ☒ 4. Used Oil Fuel Marketer

If "Yes", mark each that applies.

☐ a. Marketer Who Directs Shipment of
Off-Specification Used Oil to
Off-Specification Used Oil Burner☐ b. Marketer Who First Claims the
Used Oil Meets the Specifications

11. Description of Hazardous Wastes (See instructions on page 22.)

- A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.

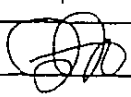
F039						

- B. Waste Codes for State-Regulated (i.e., non-Federal) Hazardous Wastes. Please list the waste codes of the State-regulated hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed for waste codes.

12. Comments (See instructions on page 22.)

This permit application applies to the 69-acre closed hazardous waste disposal facility at the CECOS International, Inc. Calcasieu Facility. The closed facility comprises the following units: closed surface Impoundments 2, 3, 4, 5, 6, 7, 8, 9, and 10; closed Landfills 1, 2, 3, 4, 5, 6, 7, and 8; six closed Mixing Basins; two closed pH-Adjustment Basins; and a closed Equalization Basin. See the attached pages for additional information on unit dimensions, capacities, dates of last waste receipt, and closure certification dates.

13. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. For the RCRA Hazardous Waste Part A Permit Application, all operator(s) and owner(s) must sign (see 40 CFR 270.10 (b) and 270.11). (See instructions on page 22.)

Signature of operator, owner, or an authorized representative	Name and Official Title (type or print)	Date Signed (mm/dd/yyyy)
	Joe Benco - Director, Engineering	4/13/08

Impoundment 2 – Average dimension of 175 ft. x 300 ft. x 8 ft. Approximate capacity of 15,500 cubic yards. Stopped receiving waste in 1979. The area previously occupied by Impoundment 2 was subexcavated to become Landfill Cell 8, which was then never used for hazardous waste activities.

Impoundment 3 – Average dimension of 225 ft. x 600 ft. x 13 ft. Approximate capacity of 70,000 cubic yards. Stopped receiving waste in 1981. Certified closed in 1999.

Impoundment 4 – Average dimension of 175 ft. x 575 ft. x 7 ft. Approximate capacity of 38,000 cubic yards. Stopped receiving waste in 1981. Certified closed in 1999.

Impoundment 5 – Average dimension of 200 ft. x 650 ft. x 8 ft. Approximate capacity of 40,000 cubic yards. Stopped receiving waste in 1979. Certified closed in 1999.

Impoundment 6 – Average dimension of 225 ft. x 750 ft. x 6.5 ft. Approximate capacity of 37,000 cubic yards. Stopped receiving waste in 1980. Certified closed in 1999.

Impoundment 7 – Average dimension of 325 ft. x 700 ft. x 8 ft. Approximate capacity of 67,400 cubic yards. Stopped receiving waste in 1981. Impoundments 7 and 8 were cleaned out and subexcavated to become Landfill cell 7.

Impoundment 8 – Average dimension of 275 ft. x 700 ft. x 8 ft. Approximate capacity of 57,000 cubic yards. Stopped receiving waste in 1979. Impoundments 7 and 8 were cleaned out and subexcavated to become Landfill cell 7.

Impoundment 9 – Average dimension of 90 ft. x 750 ft. x 8 ft. Approximate capacity of 20,000 cubic yards. Stopped receiving waste in 1981. Certified closed in 1999.

Impoundment 10 – Average dimension of 190 ft. x 675 ft. x 8 ft. Approximate capacity of 38,000 cubic yards. Impoundment 10 was used as a stormwater retention pond until 1983. Confirmed closed and in Post-Closure in a November 16, 1999 LDEQ inspection letter.

Cell 1 – Approximate dimensions of 200 ft. x 200 ft. x 30 ft. Approximate capacity of 30,000 cubic yards. Stopped receiving waste in 1979. Confirmed closed and in Post-Closure in a November 16, 1999 LDEQ inspection letter.

Cell 2 – Approximate dimensions of 200 ft. x 200 ft. x 30 ft. Approximate capacity of 30,000 cubic yards. Stopped receiving waste in 1979. Confirmed closed and in Post-Closure in a November 16, 1999 LDEQ inspection letter.

Cell 3 – Approximate dimension of 200 ft. x 200 ft. x 30 ft. Approximate capacity of 30,000 cubic yards. Stopped receiving waste in 1979. Confirmed closed and in Post-Closure in a November 16, 1999 LDEQ inspection letter.

Cell 4 – Approximate dimension of 300 ft. x 300 ft. x 30 ft. Approximate capacity of 68,000 cubic yards. Stopped receiving waste in July 1980. Confirmed closed and in Post-Closure in a November 16, 1999 LDEQ inspection letter.

Cell 5 – Approximate capacity of 250 ft. x 300 ft. x 30 ft. Approximate capacity of 55,000 cubic yards. Stopped receiving waste in 1981. Confirmed closed and in Post-Closure in a November 16, 1999 LDEQ inspection letter.

Cell 6 – Approximate dimension of 350 ft. x 650 ft. x 30 ft. Approximate capacity of 193,000 cubic yards. Stopped receiving waste in 1981. Confirmed closed and in Post-Closure in a November 16, 1999 LDEQ inspection letter.

Cell 7 – Approximate dimension of 450 ft. x 650 ft. x 30 ft. Approximate capacity of 259,000 cubic yards. Stopped receiving waste in 1984. Confirmed closed and in Post-Closure in a November 16, 1999 LDEQ inspection letter.

Cell 8 – Approximate dimension of 500 ft. x 125 ft. x 11 ft. Not used for hazardous waste disposal. Closed in 1991 using clean fill.

Six Mixing Basins – Approximate dimension of 15 ft. x 60 ft. x 10 ft each. Approximate capacity of 330 cubic yards. Stopped receiving waste in 1983. Certified closed in 1997.

pH Adjustment Basins – Two basins were used to adjust the pH of the liquid wastes prior to disposal in the deep injection well. Each pH Adjustment Basin was approximately 550 feet long by 40 feet wide by 5 feet deep. Approximate capacity of each pH Adjustment Basin was 825,000 gallons. Stopped receiving waste in 1985. Certified closed in 1997.

Equalization Basin – Prior to construction of the Tank Area (which is part of a separate permit renewal application,) incoming liquids were first placed in the pH Adjustment Basins. The liquids were then transferred from the pH Adjustment Basins to the Equalization Basin. The Equalization Basin liquids were then pumped to the injection well (which is permitted under separate administrative authority). The approximate dimensions of the Equalization Basin were 600 feet long by 250 feet wide by 10 feet deep. Approximate capacity of the Equalization Basin was 12 million gallons. Stopped receiving waste in 1985. Certified closed in 1997

United States Environmental Protection Agency
HAZARDOUS WASTE PERMIT INFORMATION FORM

Facility Permit Contact (See instructions on page 23)	First Name: Oliver	MI:	Last Name: Ford, Jr.
	Phone Number: (337) 527-6857		Phone Number Extension: 202
Facility Permit Contact Mailing Address (See instructions on page 23)	Street or P.O. Box: P.O. Box 1849		
	City, Town, or Village: Sulphur		
	State: Louisiana		
	Country: U.S.A.		Zip Code: 70664
Operator Mailing Address and Telephone Number (See instructions on page 23)	Street or P.O. Box: 918 Willow Springs Road		
	City, Town, or Village: Westlake		
	State: Louisiana		
	Country: U.S.A.	Zip Code: 70669	Phone Number: (337) 527-6857
General Owner Mailing Address and Telephone Number (See instructions on page 23)	Street or P.O. Box: 18500 North Allied Way		
	City, Town, or Village: Phoenix		
	State: AZ		
	Country: U.S.A.	Zip Code: 85054	Phone Number:
Facility Existence Date (See instructions on page 24)	Facility Existence Date (mm/dd/yyyy): 11/28/1977		
Other Environmental Permits (See instructions on page 24)			
A. Permit Type (Enter code)	W	B. Permit Number	C. Description
	L A 0 0 5 8 8 8 2		LPDES
	2 0 0 2 0 6 W D		Underground injection well
	0 5 2 0 0 0 1 4 9 0 5		Air
Nature of Business (Provide a brief description; see instructions on page 24)			
<p>CECOS International, Inc. Calcasieu Facility includes a 69-acre closed hazardous waste disposal facility. The facility performs post-closure care and monitoring. The closed portion of the facility no longer stores, or disposes of hazardous wastes. The Calcasieu Facility also includes a Tank Area and underground injection well, but these are not included in this permit application.</p>			

Process Codes and Design Capacities (See instructions on page 24) - Enter information in the Sections on Form Page 3.

PROCESS CODE - Enter the code from the list of process codes in the table below that best describes each process to be used at the facility. Fifteen codes are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04 and X99), enter the process information in Item 9 (including a description).

B. PROCESS DESIGN CAPACITY - For each code entered in Section A, enter the capacity of the process.

- 1. AMOUNT** - Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process.
- 2. UNIT OF MEASURE** - For each amount entered in Section B(1), enter the code in Section B(2) from the list of unit of measure codes below that describes the unit of measure used. Select only from the units of measure in this list.

C. PROCESS TOTAL NUMBER OF UNITS - Enter the total number of units for each corresponding process code.

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
	<u>Disposal:</u>			<u>Treatment (continued):</u>	
9	Underground Injection Well Disposal	Gallons; Liters; Gallons Per Day; or Liters Per Day	T81	Cement Kiln	For T81-T93:
0	Landfill	Acre-feet; Hectare-meter; Acres; Cubic Meters; Hectares; Cubic Yards	T82	Lime Kiln	
1	Land Treatment	Acres or Hectares	T83	Aggregate Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; or Million Btu Per Hour
2	Ocean Disposal	Gallons Per Day or Liters Per Day	T84	Phosphate Kiln	
3	Surface Impoundment Disposal	Gallons; Liters; Cubic Meters; or Cubic Yards	T85	Coke Oven	
4	Other Disposal	Any Unit of Measure in Code Table Below	T86	Blast Furnace	
	<u>Storage:</u>		T87	Smelting, Melting, or Refining Furnace	
	Container	Gallons; Liters; Cubic Meters; or Cubic Yards	T88	Titanium Dioxide Chloride Oxidation Reactor	
	Tank Storage	Gallons; Liters; Cubic Meters; or Cubic Yards	T89	Methane Reforming Furnace	
	Waste Pile	Cubic Yards or Cubic Meters	T90	Pulping Liquor Recovery Furnace	
	Surface Impoundment Storage	Gallons; Liters; Cubic Meters; or Cubic Yards	T91	Combustion Device Used In The Recovery Of Sulfur Values From Spent Sulfuric Acid	
	Drip Pad	Gallons; Liters; Acres; Cubic Meters; Hectares; or Cubic Yards	T92	Halogen Acid Furnaces	
	Containment Building Storage	Cubic Yards or Cubic Meters	T93	Other Industrial Furnaces Listed In 40 CFR §260.10	
	Other Storage	Any Unit of Measure in Code Table Below	T94	Containment Building - Treatment	Cubic Yards; Cubic Meters; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour
	<u>Treatment:</u>			<u>Miscellaneous (Subpart X):</u>	
	Tank Treatment	Gallons Per Day; Liters Per Day	X01	Open Burning/Open Detonation	Any Unit of Measure in Code Table Below
	Surface Impoundment Treatment	Gallons Per Day; Liters Per Day	X02	Mechanical Processing	Short Tons Per Hour; Metric Tons Per Hour; Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; Kilograms Per Hour; Gallons Per Hour; Liters Per Hour; or Gallons Per Day
	Incinerator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour	X03	Thermal Unit	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Gallons Per Day; Liters Per Hour; or Million Btu Per Hour
	Other Treatment	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Gallons Per Day; Liters Per Hour; or Million Btu Per Hour	X04	Geologic Repository	Cubic Yards; Cubic Meters; Acre-feet; Hectare-meter; Gallons; or Liters
	Boiler	Gallons; Liters; Gallons Per Hour; Liters Per Hour; Btu Per Hour; or Million Btu Per Hour	X99	Other Subpart X	Any Unit of Measure Listed Below

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
Long.....	G	Short Tons Per Hour.....	D	Cubic Yards.....	Y
Per Hour.....	E	Metric Tons Per Hour.....	W	Cubic Meters.....	C
Per Day.....	U	Short Tons Per Day.....	N	Acres.....	B
.....	L	Metric Tons Per Day.....	S	Acre-feet.....	A
.....	H	Pounds Per Hour.....	J	Hectares.....	Q
.....	V	Kilograms Per Hour.....	R	Hectare-meter.....	F
		Million Btu Per Hour.....	X	Btu Per Hour.....	I

EXAMPLE FOR COMPLETING Item 8 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

E: If you need to list more than 15 process codes, attach an additional sheet(s) with the information in the same format as above. Number lines sequentially, taking into account any lines that will be used for "other" processes (i.e., D99, S99, T04 and X99) in Item 9.

[illegible]

1. Description of Hazardous Wastes (See instructions on page 25) - Enter information in the Sections on Form Page 5.

HAZARDOUS WASTE NUMBER - Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR Part 261, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in Section A, estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in Section A, estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in Section B, enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure, taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in Section A, select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the listed hazardous wastes.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in Section A, select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

Enter the first two as described above.

2. Enter "000" in the extreme right box of Item 10.D(1).

3. Use additional sheet, enter line number from previous sheet, and enter additional code(s) in Item 10.E.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in Item 10.D(2) or in Item 10.E(2).

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in Section A. On the same line complete Sections B, C and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.

2. In Section A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In Section D(2) on that line enter "included with above" and make no other entries on that line.

3. Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING Item 10 (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operations. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number	A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
															(2) PROCESS DESCRIPTION- (If a code is not entered in D(1))	
	(1) PROCESS CODES (Enter code)															
1	K	0	5	4	900	P	T	0	3	D	8	0				
	D	0	0	2	400	P	T	0	3	D	8	0				
		0	0	1	100	P	T	0	3	D	8	0				
	D	0	0	2												Included With Above

Description of Hazardous Wastes (Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES										
				(1) PROCESS CODES (Enter code)										(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
0														
1														
2														
3														

1. Map (See instructions on pages 25 and 26)

to this application a topographic map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in this map area. See instructions for precise requirements.

2. Facility Drawing (See instructions on page 26)

All existing facilities must include a scale drawing of the facility (see instructions for more detail).

3. Photographs (See instructions on page 26)

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

4. Comments (See instructions on page 26)

This permit application applies to the 69-acre closed hazardous waste disposal facility at the CECOS International, Inc. Alcasiu Facility. The closed facility comprises the following units: closed surface Impoundments 2, 3, 4, 5, 6, 7, 8, 9, and 10; closed Landfills 1, 2, 3, 4, 5, 6, 7, and 8; six closed Mixing Basins; two closed pH-Adjustment Basins; and a closed Neutralization Basin. See the attached pages for additional information on unit dimensions, capacities, dates of last waste receipt, and closure certification dates.

Impoundment 2 – Average dimension of 175 ft. x 300 ft. x 8 ft. Approximate capacity of 15,500 cubic yards. Stopped receiving waste in 1979. The area previously occupied by Impoundment 2 was subexcavated to become Landfill Cell 8, which was then never used for hazardous waste activities.

Impoundment 3 – Average dimension of 225 ft. x 600 ft. x 13 ft. Approximate capacity of 70,000 cubic yards. Stopped receiving waste in 1981. Certified closed in 1999.

Impoundment 4 – Average dimension of 175 ft. x 575 ft. x 7 ft. Approximate capacity of 38,000 cubic yards. Stopped receiving waste in 1981. Certified closed in 1999.

Impoundment 5 – Average dimension of 200 ft. x 650 ft. x 8 ft. Approximate capacity of 40,000 cubic yards. Stopped receiving waste in 1979. Certified closed in 1999.

Impoundment 6 – Average dimension of 225 ft. x 750 ft. x 6.5 ft. Approximate capacity of 37,000 cubic yards. Stopped receiving waste in 1980. Certified closed in 1999.

Impoundment 7 – Average dimension of 325 ft. x 700 ft. x 8 ft. Approximate capacity of 67,400 cubic yards. Stopped receiving waste in 1981. Impoundments 7 and 8 were cleaned out and subexcavated to become Landfill cell 7.

Impoundment 8 – Average dimension of 275 ft. x 700 ft. x 8 ft. Approximate capacity of 57,000 cubic yards. Stopped receiving waste in 1979. Impoundments 7 and 8 were cleaned out and subexcavated to become Landfill cell 7.

Impoundment 9 – Average dimension of 90 ft. x 750 ft. x 8 ft. Approximate capacity of 20,000 cubic yards. Stopped receiving waste in 1981. Certified closed in 1999.

Impoundment 10 – Average dimension of 190 ft. x 675 ft. x 8 ft. Approximate capacity of 38,000 cubic yards. Impoundment 10 was used as a stormwater retention pond until 1983. Confirmed closed and in Post-Closure in a November 16, 1999 LDEQ inspection letter.

Cell 1 – Approximate dimensions of 200 ft. x 200 ft. x 30 ft. Approximate capacity of 30,000 cubic yards. Stopped receiving waste in 1979. Confirmed closed and in Post-Closure in a November 16, 1999 LDEQ inspection letter.

Cell 2 – Approximate dimensions of 200 ft. x 200 ft. x 30 ft. Approximate capacity of 30,000 cubic yards. Stopped receiving waste in 1979. Confirmed closed and in Post-Closure in a November 16, 1999 LDEQ inspection letter.

Cell 3 – Approximate dimension of 200 ft. x 200 ft. x 30 ft. Approximate capacity of 30,000 cubic yards. Stopped receiving waste in 1979. Confirmed closed and in Post-Closure in a November 16, 1999 LDEQ inspection letter.

Cell 4 – Approximate dimension of 300 ft. x 300 ft. x 30 ft. Approximate capacity of 68,000 cubic yards. Stopped receiving waste in July 1980. Confirmed closed and in Post-Closure in a November 16, 1999 LDEQ inspection letter.

Cell 5 – Approximate capacity of 250 ft. x 300 ft. x 30 ft. Approximate capacity of 55,000 cubic yards. Stopped receiving waste in 1981. Confirmed closed and in Post-Closure in a November 16, 1999 LDEQ inspection letter.

Cell 6 – Approximate dimension of 350 ft. x 650 ft. x 30 ft. Approximate capacity of 193,000 cubic yards. Stopped receiving waste in 1981. Confirmed closed and in Post-Closure in a November 16, 1999 LDEQ inspection letter.

Cell 7 – Approximate dimension of 450 ft. x 650 ft. x 30 ft. Approximate capacity of 259,000 cubic yards. Stopped receiving waste in 1984. Confirmed closed and in Post-Closure in a November 16, 1999 LDEQ inspection letter.

Cell 8 – Approximate dimension of 500 ft. x 125 ft. x 11 ft. Not used for hazardous waste disposal. Closed in 1991 using clean fill.

Six Mixing Basins – Approximate dimension of 15 ft. x 60 ft. x 10 ft each. Approximate capacity of 330 cubic yards. Stopped receiving waste in 1983. Certified closed in 1997.

pH Adjustment Basins – Two basins were used to adjust the pH of the liquid wastes prior to disposal in the deep injection well. Each pH Adjustment Basin was approximately 550 feet long by 40 feet wide by 5 feet deep. Approximate capacity of each pH Adjustment Basin was 825,000 gallons. Stopped receiving waste in 1985. Certified closed in 1997.

Equalization Basin – Prior to construction of the Tank Area (which is part of a separate permit renewal application,) incoming liquids were first placed in the pH Adjustment Basins. The liquids were then transferred from the pH Adjustment Basins to the Equalization Basin. The Equalization Basin liquids were then pumped to the injection well (which is permitted under separate administrative authority). The approximate dimensions of the Equalization Basin were 600 feet long by 250 feet wide by 10 feet deep. Approximate capacity of the Equalization Basin was 12 million gallons. Stopped receiving waste in 1985. Certified closed in 1997

TABLE OF CONTENTS

TABLE OF CONTENTS

I.	POST-CLOSURE PERMIT PREAMBLE	1
II.	GENERAL POST-CLOSURE PERMIT CONDITIONS	6
	A. DURATION OF PERMIT	6
	B. EFFECT OF PERMIT	6
	C. PERMIT ACTIONS	6
	D. SEVERABILITY	7
	E. DUTIES AND REQUIREMENTS	7
III.	GENERAL FACILITY CONDITIONS FOR THE PERMITTED CLOSED POST-CLOSURE UNITS	21
	A. DESIGN AND OPERATION OF THE CLOSED POST-CLOSURE UNITS	21
	B. GENERAL WASTE ANALYSIS	21
	C. SECURITY	22
	D. GENERAL INSPECTION REQUIREMENTS	22
	E. PERSONNEL TRAINING	22
	F. GENERAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE	22
	G. LOCATION STANDARDS	22
	H. PRECIPITATION RUN-ON AND RUN-OFF	23
	I. HURRICANE EVENTS	23
	J. PREPAREDNESS AND PREVENTION	23
	K. CONTINGENCY PLAN	24
	L. MANIFEST SYSTEM	24

TABLE OF CONTENTS (Continued)

M.	RECORD KEEPING AND REPORTING	24
N.	POST-CLOSURE	25
O.	COST ESTIMATE FOR THE PERMITTED CLOSED POST-CLOSURE CARE UNITS	26
P.	FINANCIAL ASSURANCE FOR THE PERMITTED CLOSED POST-CLOSURE UNIT(S)	26
Q.	INCAPACITY OF THE PERMITTEE OR FINANCIAL INSTITUTIONS.....	27
IV.	PERMITTED CLOSED POST-CLOSURE UNITS	28
V.	PERMIT CONDITIONS APPLICABLE TO THE PERMITTED CLOSED POST-CLOSURE UNITS	29
A.	POST-CLOSURE CARE PERIOD	29
B.	POST-CLOSURE MAINTENANCE	29
C.	POST-CLOSURE RESTRICTIONS	30
D.	POST-CLOSURE PROPERTY OR SITE USE	30
E.	POST-CLOSURE CONTACTS	30
F.	POST-CLOSURE NOTICES.....	31
G.	CERTIFICATION OF COMPLETION OF POST-CLOSURE CARE	31
VI.	GROUNDWATER PROTECTION	32
A.	APPLICABILITY	32
B.	REQUIRED PROGRAMS.....	32
C.	GROUNDWATER PROTECTION STANDARD	33

TABLE OF CONTENTS (Continued)

D.	POINT OF COMPLIANCE	48
E.	COMPLIANCE PERIOD	49
F.	GENERAL REQUIREMENTS	49
G.	GROUNDWATER MONITORING PROGRAMS	56
1.	DETECTION MONITORING PROGRAM	57
2.	COMPLIANCE MONITORING PROGRAM	65
3.	CORRECTIVE ACTION PROGRAM	73
4.	PIEZOMETRIC LEVELS PROGRAM	75
5.	UNDERGROUND INJECTION CONTROL (UIC)	76
6.	GROUNDWATER MONITORING ELEMENTS APPLICABLE TO ALL PROGRAMS	76
H.	ANNUAL REPORT	81
I.	CORRECTIVE ACTION	82
J.	INSTALLATION/CONSTRUCTION AND ABANDONMENT OF MONITORING WELLS	83
	TABLE G.2	84
	TABLE G.3	87
	TABLE G.4	88
	FIGURE 1	92
	FIGURE 2	93
VII.	SPECIAL CONDITIONS PURSUANT TO THE 1984 HAZARDOUS AND SOLID WASTE AMENDMENTS (HSWA) TO RCRA FOR CECOS INTERNATIONAL, INC.	
A.	STANDARD CONDITIONS	94
1.	Waste Minimization	94

TABLE OF CONTENTS (Continued)

2.	Dust Suppression.....	95
3.	Permit Modification	95
4.	Suspension, Modification, or Revocation and Reissuance, and Termination of Permit.....	95
5.	Permit Review	96
6.	Compliance with Permit.....	96
7.	Specific Waste Ban	97
8.	Information Submittal	97
9.	Plans and Schedules Incorporation Into Permit	98
10.	Data Retention.....	98
11.	Solid Waste Management Units.....	99
12.	Definitions.....	99
B.	SPECIFIC CONDITIONS - INFORMATION REPOSITORY	100
C.	SPECIAL CONDITIONS - SURFACE IMPOUNDMENTS, LANDFILLS, AND AREA OF CONTAMINATION	101
D.	CORRECTIVE ACTION	102
1.	Initiation of Corrective Action.....	102
2.	Operations and Maintenance of Corrective Action	102
3.	Measures for Discovered Releases	104
E.	CORRECTIVE ACTION FOR CONTINUING RELEASES TO THE 200-FOOT AND 500-FOOT ZONES	105
F.	ADDITIONAL GROUNDWATER MONITORING AND ASSESSMENT REQUIREMENTS	105
G.	CORRECTIVE MEASURES (REMEDY) SELECTION AND IMPLEMENTATION.....	106
H.	SCOPE OF WORK FOR AN ENGINEERING FEASIBILITY PLAN	106
1.	Purpose	106
2.	Scope.....	106
Table 1:	FACILITY SUBMISSION SUMMARY.....	115

ATTACHMENT 1

BODY OF PERMIT

FINAL POST-CLOSURE PERMIT

CECOS INTERNATIONAL, INC. - WESTLAKE FACILITY

EPA ID # LAD 000 618 256

WESTLAKE, LOUISIANA

CALCASIEU PARISH

AI# 276

PER 20020003

PERMIT NUMBER LAD 000 618 256-PC-1

For

RCRA POST-CLOSURE - CLOSED UNITS

(6) Mixing Basins

(2) pH Adjustment Basins

(1) Equalization Basin

(1) Landfill Cell 7

CORRECTIVE ACTION - CLOSED AREAS/UNITS/AREA OF CONTAMINATION

Landfill Cell 1

Landfill Cell 2

Landfill Cell 3

Landfill Cell 4

Landfill Cell 5

Landfill Cell 6

Impoundment 2

Impoundment 3

Impoundment 4

Impoundment 5

Impoundment 6

Impoundment 7

Impoundment 8

Impoundment 9

Pond 10

Northeast Corner (Area of Contamination)

I. POST-CLOSURE PERMIT PREAMBLE

This permit is issued to CECOS International, Inc., Westlake Facility, Westlake, Calcasieu Parish, Louisiana (hereinafter referred to as the "Permittee"), by the Louisiana Department of Environmental Quality (LDEQ) under authority of the Louisiana Hazardous Waste Control Law, R. S. 30:2171 et seq., and the regulations adopted thereunder, and by the United States Environmental Protection Agency (EPA) under the authority of the 1984 Hazardous and Solid Waste Amendments (HSWA) to the Resource Conservation and Recovery Act (RCRA).

For the purposes of this permit, "Administrative Authority" shall mean the Secretary of the LDEQ or his/her designee.

This permit is based on information submitted in the permit application, and all subsequent amendments, and on the applicant's certification that such information is accurate and that all facilities will be constructed, operated and maintained as specified in the application.

This permit is conditioned upon full compliance with all applicable provisions of the Louisiana Hazardous Waste Control Law, R. S. 30:2171 et seq., and the regulations adopted thereunder.

All definitions contained in this permit shall have the meaning as defined in the Louisiana Administrative Code (LAC), Title 33, Part V, Subpart 1 unless otherwise stated herein.

All regulating citations are defined as being the regulation in effect on the date of issuance of this permit. New and/or amended regulations are not included as permit requirements until permit modification procedures as specified in Condition II.C of this permit are completed.

GLOSSARY OF TERMS

For the purpose of this permit, terms used herein shall have the same meaning as those in LAC 33:V.Subpart 1 unless the context of use in this permit clearly indicates otherwise. Where terms are not otherwise defined, the meaning otherwise associated with such terms shall be as defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

"Administrative Authority" means the secretary of the Department of Environmental Quality (LDEQ) or his designee or the appropriate assistant secretary or his designee.

"ASD" means Alternate Source Determination.

"Application" refers to the RCRA Part B Permit Application and subsequent amendments submitted by the Permittee for obtaining a permit.

"CAP" means Corrective Action Program.

"CFR" means the Code of Federal Regulations.

"CMP" means Compliance Monitoring Program.

"CWA" means Clean Water Act.

"Constituents of Concern" (COC) means the COPC's that pose a significant risk.

"Constituents of Potential Concern" (COPC) means chemicals from hazardous waste and hazardous waste constituents that are potentially site related and have data of quality for use in the Screen or site-specific risk assessment. The facility should compile a list of COPC's for each release site based on existing sampling data, waste analysis reports, etc.

"Corrective Action" is an activity conducted to protect human health and the environment.

"DMP" means Detection Monitoring Program.

"DNAPL" a dense liquid not dissolved in water, commonly referred to as "free product."

"Department" means the Louisiana Department of Environmental Quality (LDEQ).

"EPA" means the United States Environmental Protection Agency.

"GWPS" means Groundwater Protection Standards.

"GWSAP" means Groundwater Sampling and Analysis Plan.

"HSWA" means the 1984 Hazardous and Solid Waste Amendments to RCRA.

"Hazardous constituent" means any constituent identified in LAC 33:V.Chapter 31. Table 1, or any constituent identified in LAC 33:V.3325. Table 4.

"LDEQ" means the Louisiana Department of Environmental Quality.

"LELAP" means the Louisiana Environmental Laboratory Accreditation Program.

"LNAPL" a light liquid not dissolved in water, commonly referred to as "free product."

"Operating record" means written or electronic records of all maintenance, monitoring, inspection, calibration, or performance testing or other data as may be required--to demonstrate compliance with this permit, document noncompliance with this permit, or document actions taken to remedy noncompliance with this permit. A minimum list of documents that must be included in the operating record are identified at LAC 33:V.1529.b.

"PLP" means Piezometric Levels Programs.

"POC" means Point of Compliance.

"Permittee" means CECOS International, Inc., 918 Willow Springs Road, Westlake, Louisiana 70669.

"RCRA Permit" means the full permit, with Resource Conservation and Recovery Act (RCRA).

"RFA" means RCRA Facility Assessment.

"RFI" means RCRA Facility Investigation.

"Release" means any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping or disposing of hazardous wastes (including hazardous constituents) into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous wastes or hazardous constituents).

"SARA" means Superfund Amendments and Reauthorization Action of 1985.

"Solid Waste Management Unit" (SWMU) mean any discernable unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

“VOC” means Volatile Organic Compounds.

“SVOC” means Semi-Volatile Organics Compounds.

If, subsequent to the issuance of this permit, regulations are promulgated which redefine any of the above terms, the Administrative Authority may, at its discretion, apply the new definition to this permit.

II. GENERAL POST-CLOSURE PERMIT CONDITIONS

II.A. DURATION OF PERMIT

The permit is effective as of the date indicated on the accompanying signature page and shall remain in effect for a maximum period of ten (10) years from the effective date, in accordance with LAC 33:V.315, unless revoked, reissued, modified, or terminated for just cause.

II.B. EFFECT OF PERMIT

This permit authorizes the Permittee to conduct post-closure care and corrective action for a period of no less than thirty (30) years, monitor groundwater, and conduct corrective action for groundwater contamination in accordance with the conditions of this permit, unless the permit is amended by the Administrative Authority. The post-closure care period for the permitted units began November 1999. The Permittee is prohibited from any storage, treatment or disposal of hazardous waste not authorized by statute, regulation or this permit. Compliance with this permit, LAC 33:V.Subpart 1 and HSWA, constitutes compliance for purposes of enforcement, with Subtitle C of RCRA and Chapter 9 of the Louisiana Environmental Quality Act (Act). However, compliance with the terms of this permit does not constitute a defense to any order issued or any action brought under Section 3013 or Section 7003 of RCRA, or under Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 {42 U.S.C. 9606 (a)}.

In accordance with LAC 33:V.307.B and C, issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local laws or regulations.

II.C. PERMIT ACTIONS

The Permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the Permittee's misrepresentation of any relevant facts at any time, may be cause for modification or termination of this permit in accordance with LAC 33:V.323.B.2 or LAC 33:V.323.B.3.b.ii.

Any inaccuracies found in the permit application may be cause for revocation or modification of this permit. The Permittee must inform the Administrative Authority of any deviation from, changes in, or inaccuracies in the information in the permit application.

The Administrative Authority may suspend, modify, revoke and reissue, or terminate the permit for cause or when necessary to be protective of human health or the environment as specified in 40 CFR 270.41, 270.42, 270.43 or the LAC 33:V.309.F, 311.A, or 323. The Administrative Authority may modify the permit when the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued. The filing of a request for permit modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any permit condition.

II.D. SEVERABILITY

The conditions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of the permit shall not be affected thereby.

II.E. DUTIES AND REQUIREMENTS

II.E.1. Duty to Comply

The Permittee shall comply with all conditions of this permit, as required by LAC 33:V.309.A, except to the extent and for the duration such noncompliance may be authorized by an emergency permit. Any permit noncompliance, other than noncompliance authorized by an emergency permit (LAC 33:V.701), constitutes a violation of the LAC 33:V. Subpart 1 and the Environmental Quality Act and is grounds for enforcement action which may include permit termination, permit revocation and reissuance, permit modification, or denial of a permit renewal application.

II.E.2. Duty to Reapply

The Permittee must reapply for a permit to continue an activity regulated by this permit after the expiration date of this permit, as required by LAC 33:V.303.N and 309.B. Notification shall be at least 180 calendar days before the permit expires.

II.E.3. Permit Extension

This permit and all conditions herein will remain in effect beyond the permit's expiration date until the Administrative Authority issues a final decision on the re-application, provided the Permittee has submitted a timely, complete new permit application as

provided in the LAC 33:V.309.B and 315.A.

II.E.4. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit in accordance with LAC 33:V.309.C.

II.E.5. Duty to Mitigate

The Permittee shall immediately take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with the permit as required by LAC 33:V.309.D.

II.E.6. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain the closed units and systems of treatment and control (and related appurtenances) that are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

II.E.7. Duty to Provide Information

The Permittee shall furnish to the Administrative Authority, within a reasonable time, any information which the Administrative Authority may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. The Permittee shall also furnish to the Administrative Authority, upon request, copies of records required to be kept by this permit and in accordance with LAC 33:V.309.H.

II.E.8. Inspection and Entry

The Permittee shall allow the Administrative Authority or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- II.E.8.a.** enter upon the Permittee's premises where a regulated activity is located or conducted, or where records must be maintained under the conditions of this permit;
- II.E.8.b.** have access to and copy, at reasonable times, any records that must be maintained under the conditions of the permit;
- II.E.8.c.** inspect, at reasonable times, any permitted closed unit(s) and any associated equipment (including monitoring and control equipment), practices, or operations regulated or required under the permit; and
- II.E.8.d.** sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Administrative Authority any substances or parameters at any location.

II.E.9. Sampling Monitoring and Records

- II.E.9.a.** Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The methods used to obtain a representative sample of the waste to be analyzed must be the appropriate method specified from Appendix I of 40 CFR Part 261. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, "SW-846", latest revision, or an equivalent method.
- II.E.9.b.** Records of monitoring information shall include:
 - II.E.9.b.i.** the date, exact place, and time of sampling or measurements;
 - II.E.9.b.i.ii.** the name(s) and signature(s) of the individual(s) who performed the sampling or measurements;
 - II.E.9.b.i.iii.** the date(s) analyses were performed;
 - II.E.9.b.i.iv.** the name(s) and signature(s) of the individual(s) who performed the analysis;
 - II.E.9.b.i.v.** the analytical techniques or methods used;
 - II.E.9.b.i.vi.** the results of such analyses; and

II.E.9.b.i.vii. the associated quality assurance performance data.

II.E.10. Laboratory Quality Assurance/Quality Control

In order to ensure the accuracy, precision and reliability of data generated for use, the Permittee shall submit a statement, certified as specified in LAC 33:V.513 and included in the annual report, indicating that:

II.E.10.a. Any commercial laboratory providing analytical results and test data to the Department required by this permit is accredited by the Louisiana Environmental Laboratory Accreditation Program (LELAP) in accordance with LAC 33:I.Subpart 3, Chapter 45. Laboratory data generated by commercial laboratories not accredited under LELAP will not be accepted by the Department.

LAC 33:I.Subpart 3 (Chapters 45-49) provides requirements for the accreditation program. Regulations and a list of accredited labs are available on the LDEQ website at: <http://www.deq.louisiana.gov/portal/tabid/2412/Default.aspx>.

In accordance with LAC 33:V.4501, the requirements for LELAP accreditation applies whenever data is:

- submitted on behalf of a facility;
- required as part of a permit application;
- required by order of the LDEQ;
- required to be included in a monitoring report submitted to the LDEQ;
- required to be submitted by contract; or
- otherwise required by the LDEQ regulations.

II.E.10.b. If the Permittee decides to use its own in house laboratory for test and analysis, the laboratory is not required to be accredited by LELAP. However, the laboratory must document quality assurance/quality control procedures.

II.E.10.c. For approval of equivalent testing or analytical methods, the Permittee may petition for a regulatory amendment under LAC 33:V.105.I and LAC 33:I.Chapter 9. In cases where an approved methodology for a parameter/analyte is not available or listed, a request to utilize an alternate method shall be submitted to the Administrative Authority for approval. Documentation must be submitted to the LDEQ

that will verify that the results obtained from the alternate method are equal to or better than those obtained from EPA-accepted methods, as well as those deemed equivalent by the LDEQ.

II.E.11. Retention of Records

The Permittee shall, for the duration of the post-closure care period, as required by LAC 33:V.309.J and LAC 33:V.1529.A, B, and C, maintain records of all groundwater monitoring data and reports, boring logs, well completion data, associated potentiometric surface maps, and associated constituent isoconcentration maps from all sampling events covered by this permit. All records, including plans, must be furnished upon request and made available at all reasonable times as required by LAC 33:V.1529.C.

The Permittee shall retain records of all other monitoring information required by this permit, including all calibration records, field log notes, and maintenance records for LDEQ inspection for a period of not less than three (3) years, as required by LAC 33:V.317.B, from the date of the sample, measurement, report, or record except where otherwise required by the permit, or by order of the Administrative Authority. These periods may be extended by request of the Administrative Authority at any time and are automatically extended during the course of any unresolved enforcement action regarding the closed units.

The Permittee shall, for the life of the permit, maintain records of all data used to complete the application for this permit and any supplemental information submitted under the Louisiana Hazardous Waste Control Law (LA. R.S. 30:2171 et seq.).

II.E.12. Notices of Planned Physical Changes

The Permittee shall give notice to the Administrative Authority, as soon as possible, of any planned physical alterations or additions to the permitted facility, in accordance with LAC 33:V.309.L.1.

II.E.13. Physical Facility after Modification

In accordance with LAC 33:V.303.I, no major modification of the closed unit(s) may occur without prior approval of the Administrative Authority. The Permittee may not modify any portion of the closed unit(s) until:

- II.E.13.a.** the Permittee has submitted to and received approval from the Administrative Authority, by certified mail or hand delivery, a letter signed by the Permittee and an independent registered professional engineer licensed in Louisiana stating that the unit is complete and has been constructed or modified in compliance with the permit; and
- II.E.13.b.** the Administrative Authority has inspected the modified unit following a request to make final inspection by the Permittee and finds it is in compliance with the conditions of the permit and all applicable sections of LAC 33:V.Subpart 1, and has issued an Order to Proceed.

II.E.14. Anticipated Noncompliance

The Permittee shall give advance notice to the Administrative Authority of any planned changes to the permitted closed unit(s) or any activity that may result in noncompliance with permit requirements, in accordance with LAC 33:V.309.L.2.

II.E.15. Transfer of Permits

This permit may be transferred to a new owner or operator with written approval by the Administrative Authority and if it is modified or revoked and reissued pursuant to the LAC 33:V.309.L.4, 321.B, 321.C.4, 1531 and LAC 33:I.Chapter 19. Before transferring ownership or operation of the permitted closed unit(s) during the post-closure care period, the Permittee shall notify the new owner or operator in writing of all the requirements of LAC 33:V. Subpart 1.

The Permittee's failure to notify the new owner or operator of the requirements of LAC 33:V.Subpart 1 and LAC 33:I.Chapter 19 in no way relieves the new owner or operator of his obligation to comply with all applicable requirements.

Changes in the ownership or operational control of a facility shall be made with written notification to the Office of Environmental Services. The new owner or operator shall submit a Name/Ownership/Operator Change Form (NOC-1 Form) prior to or no later than forty-five (45) days after the change. The Administrative Authority may initiate action to terminate or revoke an existing media permit for a failure to disclose a change of ownership or operational control within forty-five (45) days after the change, in accordance with LAC 33:I.1909.B. The previous Permittee and the new Permittee must comply with all applicable

requirements of LAC 33:I.1909.

II.E.16. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than fourteen (14) days following each schedule date as required by LAC 33:V.309.L.6.

II.E.17. Emergency Unauthorized Discharge Notification

In accordance with LAC 33:I.3915, in the event of an unauthorized discharge that results in an emergency condition (an emergency condition is any condition which could be reasonably expected to endanger the health and safety of the public, cause significant adverse impact to the land, water, or air environment, or cause severe damage to property), the Permittee shall notify the DPS (Department of Public Safety) 24-hour Louisiana Emergency Hazardous Materials Hotline by telephone at (225) 925-6595 immediately, but in no case later than one (1) hour after learning of the discharge. The DPS 24-hour Louisiana Emergency Hazardous Materials Hotline will subsequently notify the Department regarding the details of the discharge.

II.E.18. Non-Emergency Unauthorized Discharge Notification

In accordance with LAC 33:I.3917, in the event of an unauthorized discharge that exceeds a reportable quantity specified in LAC 33:I.Chapter 39.Subchapter E and/or results in contamination of the ground waters of the state but does not result in an emergency condition, the Permittee shall promptly notify the Department within twenty-four (24) hours after learning of the discharge. Notification shall be made to the Office of Environmental Compliance, Emergency and Radiological Services Division, Single Point of Contact (SPOC) in accordance with the procedure and content requirements specified in LAC 33:I.3923.

II.E.19. Unauthorized Discharge to Groundwater Notification

In accordance with LAC 33:I.3919, in the event of an unauthorized discharge resulting in contamination of ground waters of the state by moving in, into, within or on any saturated subsurface strata, the Permittee shall promptly notify the Department within twenty-four (24) hours after learning of the discharge. Notification shall be made to the Office of Environmental Compliance, Emergency and

Radiological Services Division, SPOC in accordance with the procedure and content requirements specified in LAC 33:I.3923.

II.E.20. Written Notification Reports for Unauthorized Discharges

The Permittee shall submit written reports to the SPOC for any unauthorized discharges requiring notification under Conditions, II.E.17., II.E.18. and II.E.19. of this permit. The written report shall be submitted in accordance with the procedure and content requirements specified in LAC 33:I.3925.

II.E.21. Noncompliance Reporting

The Permittee shall report orally, to the Administrative Authority, within twenty-four (24) hours of any noncompliance with the permit that may endanger human health or the environment, except where more immediate notification is required by LAC 33:I.Chapter 39, Notification Regulations and Procedures for Unauthorized Discharges. This report shall include the following:

- II.E.21.a.** information concerning the release of any hazardous waste that may endanger public drinking water supplies; and
- II.E.21.b.** information concerning the release or discharge of any hazardous waste, or of a fire or explosion at the permitted closed unit(s), that could threaten the environment or human health outside the facility. The description of the occurrence and its cause shall include:
 - II.E.21.b.i.** name, address, and telephone number of the owner or operator;
 - II.E.21.b.ii.** name, address, and telephone number of the facility;
 - II.E.21.b.iii.** date, time, and type of incident;
 - II.E.21.b.iv.** name and quantity of material(s) involved;
 - II.E.21.b.v.** extent of injuries, if any;
 - II.E.21.b.vi.** an assessment of actual or potential hazard to the environment and human health outside the facility, where this is applicable; and

II.E.21.b.vii. estimated quantity and disposition of recovered material(s) that resulted from the incident.

II.E.22. Follow-up Written Report of Noncompliance

The Permittee shall provide a written submission to the Administrative Authority within five (5) working days, from the date the Permittee becomes aware of any noncompliance which may endanger human health or the environment, not reported under Condition II.E.20. of this permit. The written submission shall contain a description of the noncompliance and its cause; name and quantity of materials involved; the periods of noncompliance (including exact dates and times); whether the noncompliance has been corrected; and if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. If the Administrative Authority waives the requirement, then the Permittee submits a written report within fifteen (15) days after the time the Permittee becomes aware of the circumstances, as required by LAC 33:V.309.L.7.

II.E.23. Other Noncompliance

The Permittee shall report all instances of noncompliance not reported under LAC 33:V.309.L.1, L.2, L.6, and L.7 at the time the required monitoring reports are submitted. The reports shall contain the information listed in Condition II.E.21., Noncompliance Reporting.

II.E.24. Other Information

If the Permittee becomes aware that he or she failed to submit any relevant facts in the hazardous waste post-closure permit application, or submitted incorrect information in a hazardous waste post-closure permit application, or in any report to the Administrative Authority, the Permittee shall promptly submit such facts or information, as required by LAC 33:V.309.L.12.

II.E.25. Signatory Requirement

All applications, reports, or other information submitted to the Administrative Authority shall be signed and certified according to LAC 33:V.507, 509, 511, and 513.

II.E.26. Schedule of Compliance

The Permittee shall comply with the following items:

- II.E.26.a. The Permittee must submit within forty-five (45) days of the effective date of this permit, documentation of acceptance or denial of arrangements with local authorities.
- II.E.26.b. The Permittee must submit any proposed changes to the groundwater monitoring systems to the Administrative Authority for review and approval prior to implementation.
- II.E.26.c. The Permittee must submit any proposed changes to the recovery systems to the Administrative Authority for review and approval prior to implementation.
- II.E.26.d. The Permittee must submit within thirty (30) days of the completion of work in Condition VII.F. of this permit a revised Groundwater Sampling and Analysis Plan (GWSAP) that includes all changes to the groundwater monitoring/recovery system and incorporate all corrections, revisions and updated maps.
- II.E.26.e. The Permittee shall provide the Administrative Authority with ten (10) days notice of intent to proceed with field activities provided in Condition VII.F. in order to allow the Administrative Authority to observe the activities.

II.E.27. Updated Documents To Be Submitted Prior To Operations
RESERVED

II.E.28. Modification of Post-Closure Permit

The Administrative Authority may modify a post-closure permit if it has received information that justifies the application of different permit conditions or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued as required by the LAC 33:V.323.B.2.c.ii and iii.

II.E.29. Documents To Be Maintained at the Facility Site

- II.E.29.a. The Permittee shall maintain at the facility until post-closure care is completed and certified by an independent Louisiana registered professional engineer, the following documents and any amendments, revisions, and modifications to these

documents. Any revision or changes shall be submitted with the annual report unless previously submitted.

- II.E.29.a.i.** Groundwater Sampling and Analysis Plan submitted in accordance with LAC 33:V.517.E and 1519 (see Attachment 1).
- II.E.29.a.ii.** Contingency Plan submitted in accordance with LAC 33:V.1109.E.1.e, LAC 33:V.1117 and 1513 (see Attachment 1).
- II.E.29.a.iii.** Post-Closure Plan and any post-closure care requirements that may be required initially or through permit modifications submitted in accordance with LAC 33:V.3523 through 3527 (see Attachment 1).
- II.E.29.a.iv.** Cost estimate for permitted closed units post-closure care and any post-closure cost estimate (including corrective action costs) that may be required through permit modifications submitted in accordance with LAC 33:V.3709 (see Attachment 1).
- II.E.29.a.v.** Personnel Training Plan and the training records required by LAC 33:V.1515 (see Attachment 1).
- II.E.29.a.vi.** the Operating Record required by LAC 33:V.1529.
- II.E.29.a.vii.** the Corrective Action Report required by the LAC 33:V.3321 and Condition VI, "Groundwater Protection".
- II.E.29.a.viii.** the Inspection Plan developed in accordance with LAC 33:V.517.G, 1509.B, and 3523 (see Attachment 1).
- II.E.29.a.ix.** Financial assurance for the post-closure care of the closed unit(s) submitted in accordance with LAC 33:V.3711; and corrective action in accordance with LAC 33:V.3322.C.
- II.E.29.a.x.** a copy of the most recent annual report;
- II.E.29.a.xi.** the Closure Plan, the Closure Permit, the Certification of Closure, the Post-Closure Plan, the Post-Closure Permit Application, and the

Post-Closure Permit for the closed unit(s) (see Attachment 1).

II.E.29.a.xii. the most recently updated Part A of the hazardous waste permit application and the information requirements of LAC 33:V.515 for the entire hazardous waste facility.

II.E.29.a.xiii. Security Plan developed in accordance with LAC 33:V.1507 (see Attachment 1).

II.E.29.a.xiv. Waste Analysis Plan submitted in accordance with the LAC 33:V.1519 (see Attachment 1).

II.E.29.b. All proposed amendments, revisions, and modifications to any plan, document, report, or cost estimates of this permit shall be submitted to the Administrative Authority for approval in accordance with LAC 33:V.321, 322, and 323. If the Administrative Authority approves any amended document, then the amended document most recently approved by the Administrative Authority shall supersede any document previously approved.

II.E.30. Annual Report

An annual report must be submitted by March 1 of each year covering all unit(s) listed in this permit and their activities during the previous calendar year as required by LAC 33:V.1529.D.

II.E.31. Manifest

The Permittee shall report manifest discrepancies and unmanifested wastes as required by LAC.33:V.309.L.8 and 9.

II.E.32. Air Emissions

Air emissions from any hazardous waste facility shall not violate the Louisiana Air Quality Regulations. If air quality standards are exceeded, the site will follow air regulation protocol.

II.E.33. Water Discharges

Water discharges, if any, must be in conformity with effluent limitations established by the Clean Water Act operating under a National Pollutant Discharge Elimination Systems (NPDES) permit and reported as required by that permit in accordance with LAC 33:V.1505.A.1.

II.E.34. Non-Listed Hazardous Waste Units

This post-closure permit is issued for those hazardous waste units listed in Condition IV, (Permitted Closed Post-Closure Units) and Condition VII. (Corrective Action Units). If the Permittee determines that an unpermitted hazardous waste management unit exists, the Permittee must promptly notify the Administrative Authority in accordance with Condition II.E.23.

II.E.35. Compliance with Land Disposal Restrictions

The Permittee shall comply with those land disposal restrictions set forth in LA. R.S. 30:2193 and all regulations promulgated thereunder, and the HSWA portion of this permit (Condition VII.).

II.E.36. Establishing Permit Conditions

Permits for facilities with pre-existing groundwater contamination are subject to all limits, conditions, remediation and corrective action programs designated under LAC 33:V.311.D and LAC 33:V.3303.

II.E.37. Obligation for Corrective Action

Owners or operators of hazardous waste management units must have all necessary permits during the active life of the unit and for any period necessary to comply with the corrective action requirements in Condition VII. of this permit. The facility is obligated to complete facility-wide corrective action regardless of the operational status of the facility.

II.E.38. Attachments and Documents Incorporated by Reference

All attachments and documents required by this permit, including all plans and schedules, are incorporated, upon approval by the Administrative Authority, into this permit by reference and become an enforceable part of this permit. When applicable, the Permittee must modify the permit according to LAC 33:V.Chapter 3. Since required items are essential elements of this permit, failure to submit any of the required items or submission of inadequate or insufficient information may subject the Permittee to enforcement action, which may include fines, suspension, or revocation of the permit.

Any noncompliance with approved plans and schedules shall be termed noncompliance with this permit. Written requests for extension of due dates for submittals may be granted by the

Administrative Authority.

If the Administrative Authority determines that actions beyond those provided for, or changes to what is stated herein, are warranted, the Administrative Authority may modify this permit according to procedures in LAC 33:V.321.

III. GENERAL FACILITY CONDITIONS FOR THE PERMITTED CLOSED POST-CLOSURE UNITS

III.A. DESIGN AND OPERATION OF THE CLOSED POST-CLOSURE UNITS

III.A.1. The Permittee shall maintain all permitted closed post-closure units in Condition IV, Table 1 to minimize the possibility of a fire, explosion, or any unauthorized sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or water that could threaten human health or the environment.

III.A.2. The Permittee must not manage any new wastes.

III.B. GENERAL WASTE ANALYSIS

The Permittee shall only manage those wastes described in the Waste Analysis Plan referenced in Attachment 1 and must furnish the following updated information:

III.B.1. The Permittee shall review the Waste Analysis Plan annually and report to the Administrative Authority in the annual report whether any revision is required to stay abreast of changes in EPA methods and/or state regulatory provisions.

III.B.2. Annually, in accordance with LAC 33:V.1519.B, the Waste Analysis Plan must meet all the sampling and Quality Assurance/Quality Control (QA/QC) procedures. All test procedures used by the Permittee shall be maintained on file by the Permittee and made available to the Administrative Authority upon request. The Permittee shall submit a report, due March 1 each year, certified as provided for in LAC 33:V.513, reviewing and evaluating the performance of the laboratory Quality Assurance/Quality Control (QA/QC) program.

III.B.3. The Permittee shall, at a minimum, annually re-characterize all hazardous waste streams shipped off-site or treated on-site. This re-characterization shall provide a means of detecting changes in concentrations of chemical constituents, appearance of new constituents, and whether any revision is required to stay abreast of changes in EPA methods and/or State regulatory provisions. The Permittee shall report to the Administrative Authority and make all necessary revisions within thirty (30) calendar days following its report.

III.B.4. The Permittee may analyze all recovery wells in the Permittee's laboratory or an outside laboratory. The Permittee shall submit documentation or certification on the reports submitted to the Administrative Authority when a change has been made in laboratories. The documentation shall summarize the laboratory's analytical capabilities and QA/QC procedures. The laboratory's QA/QC program must meet the minimum requirements specified in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, Third Edition, as revised.

III.C. SECURITY

The Permittee shall comply with the security provisions of LAC 33:V.1507, as referenced in Attachment 1.

III.D. GENERAL INSPECTION REQUIREMENTS

The Permittee shall follow the Inspection Plan referenced in Attachment 1 of this permit. The Permittee shall remedy any deterioration or malfunction discovered by an inspection as required by LAC 33:V.1509.C. Records of inspections shall be kept as required by the LAC 33:V.1509.D. The inspection schedule shall include the regulatory requirements of LAC 33:V.517.G, 1509.A and B, and 3523.B.

III.E. PERSONNEL TRAINING

The Permittee shall conduct personnel training as required by LAC 33:V.1515.A, B, and C. This training program shall follow the outline in the Training Plan referenced in Attachment 1. The Permittee shall maintain all training documents and records as required by LAC 33:V.1515.D and E.

III.F. GENERAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE

The Permittee shall take precautions as required by LAC 33:V.1517 to prevent accidental ignition or reaction of ignitable or reactive wastes.

III.G. LOCATION STANDARDS

The Permittee has furnished evidence that it is in compliance with seismic standards as required by LAC 33:V.517.T.

The Permittee must not manage any hazardous waste on any portion of the property that lies within the 100 year flood plain (as identified in the Flood Insurance Rating Map) unless such areas are raised above this flood level or other means (e.g., levees) are provided to protect such areas from

washouts, overtopping by wave action, soil erosion or other effects of such a flood as required by LAC 33:V.1503.B.3. Such site improvements must be certified by independent licensed professional engineers and approved by Administrative Authority prior to any hazardous waste and/or hazardous waste units being placed thereon.

III.H. PRECIPITATION RUN-ON AND RUN-OFF

The Permittee must provide for the control and/or containment of run-on and run-off from the maximum rainfall occurring in twenty-four (24) hours from a 25-year storm as defined by local rainfall records and the LAC 33:V.1503.B.2. The Permittee shall comply with the requirements of LAC 33:V.2521 and 2911.

III.I. HURRICANE EVENTS

The Permittee must initiate those applicable portions of the Contingency Plan during a hurricane as well as appropriate actions required by LAC 33:V.1507, 1509 and 1511.

III.J. PREPAREDNESS AND PREVENTION

III.J.1. Required Equipment

At a minimum, the Permittee shall install and maintain the equipment set forth in the Contingency Plan, as required by LAC 33:V.1511.C.

III.J.2. Testing and Maintenance of Equipment

The Permittee shall test and maintain the equipment specified in Condition III.J.1., Required Equipment, to insure its proper operation in time of emergency. The testing and maintenance of the equipment must be documented in the operating record.

III.J.3. Access to Communications or Alarm Systems

The Permittee shall maintain access to the communications or alarm system as required by LAC 33:V.1511.E.1 and 1511.E.2.

III.J.4. Arrangements with Local Authorities

The Permittee shall document in the annual report that the requirements of LAC 33:V.1511.G have been met. This documentation shall include those State and Local agencies involved and those facilities and operations covered.

Documentation of annual written renewal of arrangements with State and Local agencies shall also be included in this report. Where state or local authorities decline to enter into such arrangements, the Permittee must document the refusal in the operating record.

III.K. CONTINGENCY PLAN

III.K.1. Implementation of Plan

The Permittee shall immediately carry out the provisions of the Contingency Plan (see Attachment 1) and follow the emergency procedures described in LAC 33:V.1513.F whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents that threaten or could threaten human health or the environment.

III.K.2. Copies of Plan

The Permittee shall comply with the requirements of LAC 33:V.1513.C.

III.K.3. Amendments to Plan

The Permittee shall review and immediately amend, if necessary, the Contingency Plan, as required by LAC 33:V.1513.D.

III.K.4. Emergency Coordinator

The Permittee shall comply with the requirements of LAC 33:V.1513.E concerning the emergency coordinator.

III.L. MANIFEST SYSTEM

The Permittee shall comply with the applicable manifest requirements of LAC 33:V. Chapter 11.

III.M. RECORD KEEPING AND REPORTING

III.M.1. Operating Record

The Permittee shall maintain a written operating record at the facility in accordance with LAC 33:V.1529.A, 1529.B, and 1529.C.

III.M.2. Annual Report

The Permittee shall comply with the annual report requirements of LAC 33:V.1529.D.

III.N. POST-CLOSURE

III.N.1. Post-Closure Care

The Permittee shall manage the closed hazardous waste management unit(s) in accordance with this permit, LAC 33:V.2521, 2911 and LAC 33:V.Chapter 35, (LAC 33:V.3523).

III.N.2. Amendment to Post-Closure Permit

The Permittee must request modification to this post-closure permit when necessary, in accordance with LAC 33:V.3523.D.and LAC 33:V.321.

III.N.3. Post-Closure Maintenance

After final closure, the Permittee must comply with all post-closure requirements contained in LAC 33:V.3519 through 3527, including maintenance and monitoring throughout the post-closure care period specified in LAC 33:V.3521.A.1. The Permittee must maintain all units in post-closure according to the requirements in Condition V.B.

III.N.4. Post-Closure Restrictions

The Administrative Authority may require, at partial and final closure, continuation of any of the security requirements of LAC 33:V.1507, during part or all of the post-closure care period when access by the public or domestic livestock may pose a hazard to human health.

III.N.5. Post-Closure Property or Site Use

III.N.5.a. Post-closure use of property on or in which hazardous wastes remain after partial or final closure must never be allowed to disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the permitted closed unit's monitoring systems, unless the Administrative Authority finds that the disturbance:

III.N.5.a.1. is necessary to the proposed use of the property, and

will not increase the potential hazard to human health or the environment; or

III.N.5.a.2. is necessary to reduce a threat to human health or the environment.

III.N.5.b. Any post-closure activity other than that specified in this Permit must have prior approval of the Administrative Authority.

III.O. COST ESTIMATE FOR THE PERMITTED CLOSED POST-CLOSURE CARE UNITS

III.O.1. The Permittee must maintain a cost estimate for post-closure care of all permitted closed unit(s) as required by LAC 33:V.3709.

III.O.2. The Permittee shall base all post-closure cost estimates on the assumption that a third-party contractor performs post-closure monitoring and maintenance in accordance with LAC 33:V.3709.A.

III.O.3. The Permittee shall consider the inventory and process conditions and their impact on the post-closure cost estimate or any re-submittal.

III.O.4. The Permittee must maintain and adjust the post-closure cost estimate for inflation, as specified in LAC 33:V.3709.B, C, D, and for other circumstances that increase the cost of post-closure.

III.O.5. During the life of the facility, the Permittee must keep, at the facility, its latest post-closure cost estimates, as necessary, to comply with LAC 33:V.3709.D.

III.O.6. Throughout the active life of the facility, the Permittee must adjust and revise its post-closure cost estimates, as necessary, to comply with the provisions of LAC 33:V.3709.

III.P. FINANCIAL ASSURANCE FOR THE PERMITTED CLOSED POST-CLOSURE UNIT(S)

Throughout the active life of the facility and post-closure care period, the Permittee must provide updates for its financial assurance mechanisms, as necessary, to comply with the provisions of LAC 33:V.3711.

III.Q. INCAPACITY OF THE PERMITTEE OR FINANCIAL INSTITUTIONS

The Permittee must comply with LAC 33:V.3717 whenever bankruptcy is initiated for the Permittee or its institutions providing financial assurance. If insurance is used for compliance with LAC 33:V.3715, the Permittee must immediately notify the Administrative Authority if the insurance company is placed in receivership.

IV. PERMITTED CLOSED POST-CLOSURE UNITS

This permit is applicable to the units known as Landfill Cell 7, Mixing Basins, Equalization Basin and pH Adjustment Basins located on the property of CECOS International, Westlake Facility, Calcasieu Parish, Louisiana. This permit also applies to any appurtenances associated with these units. The appurtenances are defined as any run-on/run-off control systems, leachate collection/leak detection systems, associated with these regulated units.

TABLE 1

UNIT NAME	UNIT TYPE	CLOSED AREA
Landfill Cell 7	Landfill	450 ft x 650 ft x 30 ft
Six (6) Mixing Basins	Surface Impoundments	15 ft x 60 ft x 10 ft (each)
Equalization Basin	Surface Impoundment	600 ft x 250 ft x 10 ft
pH Adjustment Basin	Surface Impoundment	550 ft x 40 ft x 5 ft
pH Adjustment Basin	Surface Impoundment	550 ft x 40 ft x 5ft

*** See HSWA Permit Condition VII.C for Corrective Action Units currently in Corrective Action.**

V. PERMIT CONDITIONS APPLICABLE TO THE PERMITTED CLOSED POST-CLOSURE UNITS

V.A. POST-CLOSURE CARE PERIOD

Upon the effective date of this permit the owner or operator must comply with all post-closure requirements contained in LAC 33:V.3519 through 3527, including maintenance and monitoring, for each of the hazardous waste management units, as specified in this permit. The post-closure care period will be in effect for the period of thirty (30) years, unless extended or shortened by the Administrative Authority, as specified in LAC 33:V.3521.A.1 and 2. The post-closure care period for the permitted units began November 1999.

V.B. POST-CLOSURE MAINTENANCE

After final closure, the owner or operator must comply with all post-closure requirements contained in LAC 33:V.2521, 2911 and 3519 through 3527 and Permit Condition III.O. of this permit, including maintenance and monitoring throughout the post-closure care period specified in Condition V.A and LAC 33:V.3521.A.1. The owner or operator must:

- V.B.1.** maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events.
- V.B.2.** remove and treat groundwater, in accordance with the approved Corrective Action Plan.
- V.B.3.** maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of LAC 33:V.Chapter 33 and maintain and monitor the leachate collection systems and leak detection system (i.e., Landfill cell 7).
- V.B.4.** manage a run-on and run-off control system to prevent erosion and other damage to the final cover;
- V.B.5.** protect and maintain surveyed benchmarks used in complying with LAC 33:V.Chapter 33.
- V.B.6.** for all permitted units, maintain the cover with a final cover designed, constructed and maintained to:
 - V.B.6.a.** provide long-term minimization of migration of liquids through the surface impoundments,

- V.B.6.b.** function with minimal maintenance at all permitted units,
- V.B.6.c.** promote drainage and minimize erosion or abrasion of the final cover at all permitted units,
- V.B.6.d.** accommodate settling and subsidence, as necessary, so that the cover's integrity is maintained for all permitted units, and
- V.B.6.e.** have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present at the surface impoundments.

V.B.7. The annual report shall include a Post-Closure activity report.

V.C. POST-CLOSURE RESTRICTIONS

The Administrative Authority may require, at partial and final closure, continuation of any of the security requirements of LAC 33:V.1507, during part or all of the post-closure period when access by the public or domestic livestock may pose a hazard to human health.

The Permittee must post warning signs at each entrance to the closed surface impoundments area in accordance with LAC 33:V.3521.B and LAC 33:V.1507.K.

V.D. POST-CLOSURE PROPERTY OR SITE USE

Post-closure use of property on or in which hazardous wastes remain after partial or final closure must never be allowed to disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the permitted closed unit's monitoring systems, unless the Administrative Authority finds that the disturbance:

- V.D.1.** is necessary to the proposed use of the property and will not increase the potential hazard to human health or the environment; or
- V.D.2.** is necessary to reduce a threat to human health or the environment.

Any post-closure activity other than that specified in this permit must have prior approval of the Administrative Authority.

V.E. POST-CLOSURE CONTACTS

The Permittee shall provide the name, address, and phone number of the

person or office to contact about the hazardous waste disposal unit or facility during the post-closure care period.

V.F. POST-CLOSURE NOTICES

V.F.1. The Permittee shall maintain, on site, a certification, signed by the Permittee, that he has recorded the notation as specified by LAC 33:V.3517 and maintain a copy of the document in which the notation has been placed.

V.F.2. If the Permittee or any subsequent Permittee of the land upon which these hazardous waste disposal units is located wishes to remove hazardous wastes and hazardous waste residues, the liner (if any), or contaminated soils, then he or she must request a modification to the post-closure permit in accordance with the applicable requirements in LAC 33:V.Chapters 3 and 7. The Permittee must demonstrate that the removal of hazardous wastes will satisfy the criteria of LAC 33:V.3521. By removing hazardous waste, the Permittee may become a generator of hazardous waste and must manage it in accordance with all applicable requirements of LAC 33:V, Subpart 1. If the Permittee is granted a permit modification or otherwise granted approval to conduct such removal activities, the Permittee may request that the Administrative Authority approve either:

V.F.2.a. the removal of the notation on the deed to the facility property or other instrument normally examined during title search; or

V.F.2.b. the addition of a notation to the deed or instrument indicating the removal of the hazardous waste.

V.G. CERTIFICATION OF COMPLETION OF POST-CLOSURE CARE

No later than sixty (60) days after completion of the established post-closure care period for each hazardous waste disposal unit(s), the Permittee must submit to the Administrative Authority, by registered mail, a certification that the post-closure care period for the hazardous waste disposal unit was performed in accordance with the specifications in the approved post-closure plan. The certification must be signed by the Permittee and an independent Louisiana registered professional engineer. Documentation supporting the independent Louisiana registered professional engineer's certification must be furnished to the Administrative Authority upon request until the Administrative Authority releases the Permittee from the financial assurance requirements for post-closure care under LAC 33:V.3711.I.

VI. GROUNDWATER PROTECTION

VI.A. APPLICABILITY

The regulations of LAC Title 33, Part V, Chapters 5, 15, 25, 29, 33, 35, and Louisiana's Water Control Law, R.S. 30:2076 of the Environmental Quality Act, R.S. 30:2001 et seq, and provisions of this permit shall apply to groundwater protection programs for areas identified below that are/were used to store and dispose of hazardous wastes and/or are areas currently involved in site-wide corrective action. All requirements and conditions of this permit shall apply to all applicable areas including compliance, corrective action and post-closure care periods until the concentration limits listed in Table G.2 have been achieved, or as required by the Administrative Authority. These areas are identified as:

Landfill Cells 1-5	Closed Impoundment 7
Landfill Cell 6	Closed Impoundment 8
Landfill Cell 7	Closed Impoundment 9
Closed Impoundment 2	pH Adjustment Basins (2)
Closed Impoundment 3	Equalization Basin
Closed Impoundment 4	Closed Impoundment 9
Closed Impoundment 5	Mixing Basins (6)
Closed Impoundment 6	Pond 10
	The Northeast Corner (Area of Concern)

VI.B. REQUIRED PROGRAMS

The Permittee must continue with a Detection Monitoring Program (Condition VI.G.1.), a Compliance Monitoring Program (Condition VI.G.2.) and the Piezometric Levels Program (Condition VI.G.4.) from the existing system established during the permitted monitoring period in Condition VI.G.2.a.v. herein, and continue the Corrective Action Program ordered by the Administrative Authority on February 29, 1984 and as additionally approved on August 19, 1987. All wells and piezometers must be monitored, unless exempted from the program at a later date by the Administrative Authority.

VI.C. GROUNDWATER PROTECTION STANDARD

- VI.C.1.** The Permittee must comply with conditions specified in this permit that are designed to insure that hazardous waste and hazardous waste constituents do not exceed the concentration limits in Table G.2 in the uppermost permeable zone underlying the waste management area beyond or below the point of compliance (Condition VI.D.) during the compliance period (Condition VI.E. and VI.G.2.a.v.). The protection standard does not exempt the Permittee from required corrective action regarding contamination detected in wells that are not designated POC wells.
- VI.C.2.** The Permittee must utilize and maintain the present groundwater monitoring system. The Permittee must maintain the structural and mechanical integrity of all wells and piezometers and provide protection from damage and surface infiltration in order to facilitate generation of samples which are representative of the groundwater contained within a specified water bearing zone. To determine the need for well redevelopment due to increasing turbidity levels, the Permittee will include total depth measurements of all monitor wells, in accordance with Condition VI.C.3.b.iv.(c). and as referenced in the GWSAP. The Permittee shall compare these measured total depths in accordance with Condition VI.C.3.b.iv.(c). with original total depths. If that comparison reveals that ten (10) percent or more of a well screen is "blocked" by sediments, the Permittee shall redevelop the well prior to the next sampling event. This redevelopment shall be documented by the Permittee and, upon completion, shall be reported to the Administrative Authority by correspondence.
- VI.C.3.** The following is an outline of the Groundwater Sampling and Analysis Plan (GWSAP). The GWSAP includes groundwater purging and sampling procedures, field measurement procedures, field quality assurance/quality control protocol, and other requirements for proper collection and handling of groundwater samples and recording of field observations per LAC 33:V.3315.D, 3315.E, 3317.E, 3319.C, and 3321.D.

The Permittee must adhere to the sampling and analysis plan outlined below:

- VI.C.3.a.** All wells must be sampled in accordance with Table G.4, and the test results submitted to the Administrative Authority within thirty (30) days from analytical completion of the entire sampling event or receipt of all data by from the laboratory. Data will be submitted utilizing the Administrative Authority's Groundwater Monitoring Data Report format.

VI.C.3.b. Field Procedures

VI.C.3.b.i. Health and Safety Plan

A health and safety plan is required for all groundwater sampling events. Prior to monitor well purging and sampling, the sampling contractor's Groundwater Sampling Health and Safety Plan must be in place. Designing the Groundwater Sampling Health and Safety Plan will be the responsibility of the party performing the actual work. Additionally, sampling personnel must become familiar with the facility's Emergency Procedures/Visitor Orientation Training information upon arrival to the site. OSHA 40-hour HAZWOPER certification for field personnel is required prior to performing groundwater sampling activities at the facility.

VI.C.3.b.ii. Sampling Event Preparation

VI.C.3.b.ii.(a). General Event Preparation

The laboratory performing the groundwater analysis shall supply all necessary coolers, pre-cleaned containers, trip blanks, chemical preservatives, labels, custody seals, and chains-of-custody. All field data collected during groundwater sampling activities shall be entered on a Field Data Sheet, in accordance with the approved sampling and analysis plan, or an equivalent form. Adequate instructions to the laboratory must be given in advance of each monitoring event. Details concerning any changes to the monitoring plan and/or procedures need to be provided to the laboratory prior to the field sampling personnel arriving onsite. A specific contact person shall be established at both the facility and contract laboratory for communication between the two (2) parties.

VI.C.3.b.ii.(b). Sample Container Selection

Sample containers must be constructed of a material compatible and non-reactive with the sample it is to contain. The approved sampling and analysis plan provides guidelines to determine the type and volume of appropriate containers and preservatives per EPA, laboratory and ASTM D-4448-85 standards.

VI.C.3.b.ii.(c). Sample Container Preparation

Sample containers will be purchased as a pre-cleaned product or cleaned in the laboratory in a manner consistent with EPA protocol.

VI.C.3.b.ii.(d). Equipment Preparation Prior to Site Arrival

Equipment preparation includes, at a minimum, decontamination procedures for portable purge/sample equipment, water level indicator(s), interface probe(s), and field parameter (temperature, pH, specific conductivity) measurement device(s). Operation and calibration of field instruments will be performed per the manufacturer's instructions.

- **Portable Purging and Sampling Equipment**

Portable purging and sampling equipment includes any non-dedicated/non-new and disposable pumps, bailers, tubing, or other devices used to purge and sample groundwater monitor wells. Equipment will be cleansed by hand washing in a laboratory grade non-phosphate detergent followed by rinsing with organic-free water. Equipment will be checked for proper operation prior to purging and sampling activities. Equipment will be stored and packed to maintain cleansed condition during travel.

- **Water Level Indicator(s)/Interface Probe(s)**

Water level indicator(s)/interface probe(s) will be cleansed prior to initial site arrival by hand washing the sensor probe and entire length of tape in a laboratory grade non-phosphate detergent followed by rinsing with organic-free water. While the tape is reeled back onto the carrying spool, the tape and probe will be wiped down with a clean dry paper towel.

- **Field Parameters (Temperature, pH, Specific Conductivity) Measuring Device(s)**

Field parameter measuring device(s) will be cleansed by hand washing the sample cells in a laboratory grade non-phosphate detergent followed by rinsing with organic-free water. Meters will then be checked for proper calibration and operation per the manufacturer's instructions prior to purging and sampling activities. Frequency of calibration of field instruments during purging and sampling activities will be as specified in the manufacturer's instructions. Any malfunctioning meters will be replaced prior to packing.

In the case of equipment failure, it is recommended that back-up instruments be in the sample crew's possession.

VI.C.3.b.iii. Field Quality Assurance/Quality Control Samples

Quality assurance/quality control (QA/QC) samples provide checks for potential sample contamination that may occur in the field, lab, during shipping, or other sources. Field QA/QC is monitored by the trip blank(s), field blank(s), and equipment (rinsate) blank(s). A basic description of each is as follows:

- Trip Blank – Samples will be prepared in the laboratory by filling the appropriate sample containers with deionized water. These containers are to be labeled "Trip Blank" with the analyses to be performed labeled on each container, and then shipped in the typical transportation cooler to the field and back to the laboratory along with the other sample set containers for a given event. Trip blanks are tested to detect any contamination that may occur as a result of the containers, sample coolers, cleaning procedures, or chemical preservatives. Trip blanks will consist of analysis of volatile organics and will be collected at a minimum frequency of one (1) per monitoring event.
- Field Blank – Field blank containers will be prepared in the field at a routine sample collection point during a monitoring event by filling the appropriate sample containers from the field supply of deionized water provided by the laboratory. Field blanks are tested to detect contamination that may occur as a result of site ambient air conditions and/or sample

collection/handling methods and serves as an additional check for contamination in the containers, sample transport coolers, cleaning procedures, and any chemical preservatives. Field blanks will consist of analysis of volatile organics and shall be taken and analyzed for each sampling event at a frequency of one blank (1) per twenty (20) wells sampled per monitoring event.

- **Equipment (Rinsate) Blank** - Equipment blanks will be prepared in the field immediately following decontamination cleaning procedures on non-dedicated equipment used for purging, sampling, or sample filtration. Field supply deionized water will be passed through the non-dedicated equipment in the same procedure as a groundwater sample. Equipment blanks will be analyzed for volatile organics. Equipment blanks confirm proper field decontamination procedures on non-dedicated equipment utilized in the field. Equipment blanks shall be collected at a minimum frequency of one blank (1) per ten (10) wells at which non-dedicated purge or sampling equipment are utilized per monitoring event.

VI.C.3.b.iv. Well Surveys/Integrity Inspections

VI.C.3.b.iv.(a). Well Integrity

The integrity of wells will be checked during groundwater sampling events. Each well should have a lock and appropriate cap, and the pad, surface concrete, and inner and outer protective casings should be intact. The well identification number should be observed. A site map will be used to confirm that the correct well is being sampled. Damaged wells, well pads, and/or missing caps or locks shall be noted and reported to the site operator or other appropriate personnel. Information pertaining to the well integrity will be entered onto a Field Data Sheet.

VI.C.3.b.iv.(b). Immiscible Layers Measurements

A survey of facility monitor wells (except MW-50 and WWN) with confirmed organic parameter detections will be performed annually to determine if immiscible liquids are present within the water column. Wells with confirmed organic impacts will

be measured for the presence of immiscible layers once per year. Results will be recorded on a water level/total depth/miscible phase log or an equivalent form, and must be included in the annual groundwater report.

Measurements will be taken from a reference elevation point located at the top of the well casing. The reference elevation point has been measured by a licensed surveyor in relation to Mean Sea Level (MSL) and is the same point used for determining water levels. The measurements will be recorded with a precision of ± 0.01 foot using an interface probe.

Interface probe equipment will be constructed of chemically inert materials and will be decontaminated at each well with a non-phosphate detergent followed with an organic-free water rinse. Additional cleaning procedures will be performed as deemed necessary. Measurements will be taken from the least impacted to greatest impacted well as determined from the most recent analytical data available.

VI.C.3.b.iv.(c). Total Depth Measurements

Total depth measurements will be taken annually for all facility wells except MW-50, WWN, and recovery wells with four-inch or less inner-casing diameters. Total depth measurements will be reported with a precision of ± 0.01 foot using either a weighted measuring device, water level indicator, or interface probe. The total depth measurement can be achieved by sounding the bottom of the well with the measuring probe tip. Results will be recorded on a water level/total depth/miscible phase log or equivalent form and included in the annual groundwater report.

Recovery wells with four inch or less inner-casing diameters and with dedicated pumps prevent practical measurement of total depth. Measurement requires disconnection of pump and tubing from dedicated piping and complete removal from the well. The removal of dedicated recovery well pump and tubing apparatus for other than repair or

replacement can create the potential for cross-contamination and produces a potentially unnecessary health and safety risk. Total depth measurements for recovery wells with four-inch or less inner-casing diameters will be conducted once every five (5) years. Recovery wells with four-inch or less inner-casing diameters and with dedicated pumps will also be evaluated by comparison of current and historic water volume recoveries and field water-quality observations (e.g. suspended sediment in samples).

Total depth measurements will be recorded from a reference elevation point located at the top of the well casing. The reference elevation point has been measured by a licensed surveyor in relation the Mean Sea Level (MSL) and is the same point used for determining water levels. Measuring probe equipment will be constructed of chemically inert materials and will be decontaminated at each well with a non-phosphate detergent followed with an organic-free water rinse. Additional cleaning procedures will be performed as deemed necessary. Total depth measurements will be compared with original total depths. If the initial comparison reveals that ten (10) percent or more of a well screen is "blocked" by sediments, the well shall be evaluated for redevelopment. Should redevelopment be necessary, it shall be documented and reported to the Administrative Authority by correspondence.

VI.C.3.b.iv.(d). Water Level Measurement

Water level measurements within sampled wells for determination of the groundwater surface elevation will be conducted each sampling event per LAC 33:V.3315.F. All wells (except WWN) must be measured for depth to water within a 24-hour period and prior to purging. Water level indicator equipment will be constructed of chemically inert materials and will be decontaminated at each well with a non-phosphate detergent followed with an organic water rinse. Additional cleaning procedures will be performed as deemed necessary. Water levels will be measured with a precision of +/- 0.01 foot from a reference elevation point located at

the top of the well casing. The reference elevation point has been measured by a licensed surveyor in relation the Mean Sea Level (MSL). Water level measurements will be recorded on a water level/total depth/immiscible phase log or equivalent form and included in the annual groundwater report.

VI.C.3.b.iv.(e). Well Post-Purge Recharge Evaluation

Any well that does not exhibit sufficient recharge for sampling and analysis of the required parameters after 24 hours from purge completion, will be deleted from the sampling program and included in the Piezometric Levels Program as a piezometer. However, the facility must provide documented evidence that the insufficient recharge is not due to construction deficiencies. If it is determined that a well exhibits insufficient recharge due to a construction deficiency, that well shall be plugged and abandoned within a timely manner upon approval of a plan which includes the information required by LAC 33.V.3323. A replacement well shall be installed in the appropriate sampling program upon approval by the Administrative Authority. A well with insufficient recharge within the 24-hour post-purge period that has been demonstrated to not be the result of a construction deficiency will be placed in the Piezometric Levels Program. A replacement well will be installed in the appropriate sampling program within 60 days after approval by the Administrative Authority.

VI.C.3.b.v. Well Purge

VI.C.3.b.v.(a). General Well Purge Information

Procedures and techniques for monitor well purging are an integral part of sample collection and are provided per LAC 33:V.3315.D.1. Purging a monitoring well is just as important as the subsequent sampling of the well. Water standing in a monitoring well over time may become unrepresentative of formation water because of chemical and biochemical changes which may cause water quality alterations. Groundwater wells will be purged using either dedicated submersible pumps,

non-dedicated portable pumps, or bailers. Low yield wells will be purged to dryness. Moderate to high yield wells will be purged a minimum of three (3) well casing volumes of water.

Well purging will occur in an orderly sequenced fashion, initiated at wells without impacts and ending at wells with known impacts. Purging of wells with known impacts will take place from the well with the least impact to the most impacted wells. Well sequencing will be based on the most recent analytical results. Field measurements taken during purge will be recorded at the appropriate locations on the field data sheets. Selected required field measurements during purge include depth to water, temperature, pH, specific conductivity, and total volume purged.

VI.C.3.b.vi. Dedicated Equipment

Basic purge procedures for wells with dedicated equipment are as follows:

Required Equipment:

- Dedicated Submersible Pump
- Pump controller
- Generator
- New disposable gloves of appropriate material (nitrile) / other personal protective equipment (PPE) deemed necessary
- Graduated pail or other appropriate container
- Field parameter measurement device(s)

Operating Instructions:

- Don a new pair of gloves and/or other PPE as deemed necessary.
- Connect the pump controller cord to the pump fitting at the top of the well.
- Start the generator.
- Don a new pair of gloves after handling the generator.
- Turn on the pump controller and adjust the frequency dial to the appropriate settings (in hertz).
- Observe flow rate.

- Set the controller to the desired flow rate by decreasing or increasing the frequency at the pump controller.
- Purge well of appropriate volume of water (minimum three well-casing volumes of water or until dryness is prior to three-well casing volumes).

VI.C.3.b.vii. Non-Dedicated Equipment

Required Equipment:

- Non-dedicated pump/bailer
- Pump controller (if required)
- Generator or other power source/driving mechanism for pumps / appropriate disposable string, rope, or wire for bailer
- Disposable tubing
- New disposable gloves of appropriate material (nitrile) and/or other PPE as deemed necessary
- Graduated pail or other appropriate container
- Field parameter measurement device(s)
- Decontamination containers for laboratory grade, non-phosphate soap/organic free water solution
- Decontamination containers for organic free water rinse
- Cleaning tools (e.g. scrubbers, brushes, paper towels etc.).

Operating Instructions (Specific operating instructions vary depending on the type of portable pump used; follow manufacturer's recommendations for operation. The steps listed below are generalized procedures.):

- Don a new pair of gloves and/or other PPE as deemed necessary.
- Decontaminate portable pump/bailer following necessary decontamination procedures.
- Attach disposable tubing to pump or disposable string to bailer.
- Insert pump and tubing/bailer into well.
- Start the portable pump by the appropriate method/initiate bailing.
- Adjust pump flow to desired rate.
- Purge well of appropriate volume of water (minimum three (3) well-casing volumes of water or until dryness is prior to three well-casing volumes).

When purging with a bailer, introduce bailer into water column slowly (i.e. do not “drop” into water column) to avoid agitation of water in the well and immediate formation area.

Non-dedicated equipment must be constructed of chemically inert materials and if not disposable, will be decontaminated at each well with a non-phosphate detergent followed with an organic-free water rinse. Additional cleaning procedures will be performed as deemed necessary.

VI.C.3.b.viii. Purge Water Management

Waste water generated from decontamination of equipment and purge water from wells will be collected in appropriate containers (e.g. 55-gallon drums) for all wells. Collected purge water will be disposed of onsite at the injection well storage tank facility or as otherwise directed by the Permittee’s personnel.

VI.C.3.b.ix. Monitoring Well Sample Collection

VI.C.3.b.ix.(a). General Sample Collection Information

Procedures and techniques for groundwater sample collection are provided per LAC 33:V.3315.D.1. Sampling should take place as soon as purging is complete in moderate to high yield wells. For wells purged dry, sampling generally will take place within 24 hours once the well has sufficient recharge. The time interval between the completion of well purge and sample collection should not exceed twenty-four hours.

VI.C.3.b.ix.(b). Sample Collection Order

Well sampling will be performed in an orderly sequenced fashion, initiated at wells without impacts and ending at wells with known impacts. Sampling of wells with known impacts will take place from the well with the least impact to the most impacted wells. Well sequencing will be based on the most recent analytical results. Samples should be collected and containerized according to the volatility of the requested analyses. The collection order is as follows:

- Field Parameters (Temperature, Specific Conductivity, pH)
- Volatile Organics
- Semi-Volatile Organics
- Conventional (cyanide, chloride, sulfate)

VI.C.3.b.ix.(c). Sampling Equipment/Procedures

VI.C.3.b.ix.(c)(i). Dedicated Equipment

Groundwater wells with dedicated equipment will be sampled by means of the dedicated pumps. These are the same pumps used in well purging and have the ability to achieve low flow rates of approximately 100 ml/min.

Standard procedures for collecting representative groundwater samples with dedicated equipment after completion of purge is as follows:

- Reduce flow from pump to approximately 100 ml/minute.
- Sample field parameters.
- Sample for volatile organic compounds.
- Increase flow to a moderate rate (0.2 to 1.0 liters/minute).
- Sample for all other required parameters.

VI.C.3.b.ix.(c)(ii). Non-Dedicated Equipment

Groundwater wells with non-dedicated equipment will be sampled by means of disposable bailers.

Standard procedures for collecting representative groundwater samples with non-dedicated equipment after completion of purge is as follows:

- Remove non-dedicated pump from well.
- Attach new, clean disposable string to bailer.

- Lower bailer into well. Bailer should be lowered slowly to avoid agitation or splashing of water within the well.
- Remove bailer from well and discharge water into the appropriate sample containers from the bailer.
- Sample collection order should follow.

When collecting samples, as little headspace as possible should remain in the containers. For VOC samples the container should be filled at a low flow rate (~ 100 ml/minute) until a positive meniscus is visible. No headspace or “bubbles” should be present in the sample vial to prevent potential volatilization prior to analysis.

VI.C.3.b.ix.(d). Sample Preservation

Procedures and techniques for sample preservation are provided per LAC 33:V.3315.D.2. All samples will be containerized and preserved in accordance with the approved Sample Containerization and Preservation of Samples. Preservation acids will be added to the applicable sample container either at the laboratory, by the supplier, or by the sampling crew prior to filling the container with the sample. Methods of preservation are intended to retard biological action, retard hydrolysis of chemical compounds and complexes, and reduce the volatility of constituents. Samples requiring refrigeration to four degrees Centigrade will be placed immediately into coolers containing wet ice or the equivalent and transported to the analytical laboratory as soon as practical.

VI.C.3.b.ix.(e). Field Measurements

Required field measurements for each sampling event include water levels, temperature, pH, and specific conductivity. Each of these measurements are important for the documentation of properly collected groundwater samples. Final field measurements will be provided to the laboratory for incorporation into the final laboratory report.

All instruments shall be properly calibrated and checked in accordance with the approved standards and according to the manufacturer's instructions. Any improperly operating instruments must be replaced prior to continuing sample collection operations. Back-up instruments are recommended to be available with the sample crew.

VI.C.3.b.x. Record Keeping

VI.C.3.b.x.(a). Field Data Sheets

All field notes must be completely and accurately documented. All field information will be entered on a standard Field Data Sheet, or an equivalent form. All entries should be legible and made in indelible ink. Entry errors will be crossed out with a single line and initialed by the person making the corrections. Copies of field data sheets will be retained in the operating record for the site and are considered part of the field log book.

VI.C.3.b.x.(b). Chain-of-Custody/Sample Container Labels

Proper chain of custody records are required per LAC 33: V.3315.D.4 to allow for tracing of possession and handling of samples from the time of collection through laboratory analysis and to insure the integrity of the samples and the conditions of the samples upon receipt at the laboratory. The sample collector shall fill in all applicable sections and forward the original, with the respective sample(s), to the laboratory performing the analysis. Upon receipt of the samples at the laboratory, the sample coordinator is to complete the chain of custody, make a copy for his/her files, and make the original documents part of the final analytical report. When transferring possession of samples, the transferor and transferee sign, date, and note the time at which possession changed. Samples are considered in custody if it is:

- in actual physical possession;
- in view, after being in physical possession;
- in physical possession and secured.

All sample containers will be labeled to prevent misidentification. The following will be indicated on an adhesive label with waterproof pen:

- Collector's name, date, and time of sample collection.
- Sample source.
- Sample identification number.
- Sample preservatives (if any).
- Test(s) to be performed on the sample.

VI.C.3.b.xi. Sample Transport

Procedures and techniques for sample shipment are provided per LAC 33:V.3315.D.2. Samples shall be shipped from the field back to the analytical laboratory either by hand delivery or utilizing a courier service. Samples are to be shipped in sealed insulated shipping containers which can maintain the samples at approximately 4°C when on ice. Custody seals will be placed on shipping containers (as needed) containing filled sample bottles in a manner that indicates if containers have been opened during transport. Custody seals will be signed and dated by the person preparing the container for transport. Standard shipping containers must be of sturdy water-proof design (ice chests are commonly used) equipped with cushion material to prevent breakage during shipment. The laboratory will be notified prior to sample delivery or to schedule pick up.

VI.C.3.c. Laboratory Procedures / Performance Standards

Per LAC 33:V.3315.D.3 and E, *"the groundwater monitoring program must include consistent analysis procedures that are designed to ensure monitoring results that provide a reliable indication of groundwater quality below the waste management area"* and *"must include sampling and analytical methods that are appropriate for groundwater sampling, and that accurately measure hazardous constituents in groundwater samples."* Groundwater sample analyses will be performed in accordance with test procedures presented in USEPA *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, September 1986 and any subsequent revisions or additions.

Analytical methods with equivalent or better performance for constituents not listed in EPA publication SW-846 may be implemented with prior approval by the Administrative Authority.

All laboratory QA/QC data will be maintained at the facility for a minimum of three (3) years. Laboratory QA/QC will include appropriate samples, acceptance criteria, and frequencies consistent with EPA guidelines, analytical method criteria, and the laboratory standard operating procedures (LSOP).

- VI.C.4.** The leachate monitoring systems which include one (1) collection system for each of the cells 1-5, two (2) collection systems for cell 6 (6I & 6II), three (3) collection systems for Cell 7 (7I, 7II & 7III), and one (1) leak detection system for phase III of Cell 7 must be provided and maintained in good working order at all times such that a method to secure samples from an accessible surface location is provided. The collection systems must contain self actuating pumps that must be capable of keeping the system virtually free of leachate at all times. The leachate systems must be sampled semi-annually for volatiles, semi-volatiles, and conventionals (see Table G.2) and the results submitted semi-annually. Total leachate volumes for each system must be reported. The gallons of leachate removed must be reported with the semi-annual report.

The Permittee shall sample the leak detection system of Cell 7 quarterly for volatile organic compounds, semi-volatile compounds, and Table G.2 conventional parameters. After the Permittee is relieved from continuous pumping of this system, it shall be sampled semi-annually for the same set of parameters. If at any time thereafter organic compounds are confirmed above method detection limits or other priority pollutants are confirmed as occurring above drinking water standards, the sampling frequency will revert back to quarterly. The Permittee shall pump any leachate collected in the leak detection system.

VI.D. POINT OF COMPLIANCE

In accordance with LAC 33:V.3311.A, the point of compliance (POC) at which the groundwater protection standard of LAC 33:V.3305.A applies must be monitored. The point of compliance has been identified for the Shallow Pervious Zone and the 50-Foot Zone. The downgradient POC has been assigned circumscribing a waste management area composed of more than one regulated unit per LAC 33:V.3311.B.2 and 3315.B.

The POC for the Shallow Pervious Zone and the 50-Foot Zone are defined as follows:

The vertical interval intercepted by the screens of the following monitoring wells and the horizontal surface following an imaginary line connecting the risers of the following monitoring wells for each zone listed.

Shallow Pervious Zone:
MW-2R, MW-98, MW-104

50-Foot Zone:

MW-19, MW-20, MW-45, MW-51, MW-58, MW-68, MW-69, MW-70, MW-38R

VI.E. COMPLIANCE PERIOD

The post-closure care period will be in effect for the period of thirty (30) years, unless extended or shortened by the Administrative Authority, as specified in LAC 33:V.3521.A.1 and 2.

In accordance with LAC 33.V.3313, the compliance period during which the groundwater protection standard of LAC 33:V.3305 applies shall be until concentration limits listed on Table G.2 have been achieved or, as per LAC 33:V.3313.C, when the facility has demonstrated that corrective action has been effective and the groundwater protection standard of LAC 33.V.3305 has not been exceeded for a period of three (3) consecutive years, or as required by the Administrative Authority. Corrective action shall continue until the groundwater quality in the uppermost permeable zone meets the concentration limits on Table G.2.

VI.F. GENERAL REQUIREMENTS

VI.F.1. The Permittee's groundwater monitoring system for the identified units shall consist of all wells, (i.e., monitoring, piezometers and recovery wells) listed on Table G.4 unless exempted in the future by the Administrative Authority.

VI.F.2. Upgradient wells must always yield groundwater samples from the uppermost water bearing zones that are representative of groundwater that has not been affected by possible leakage from the waste management units. Downgradient wells must yield groundwater samples from the water bearing zones that represent the quality of groundwater beneath the facilities that reach the points of compliance. All other wells and piezometers must be maintained and utilized to assess the effectiveness of the corrective action. All groundwater monitoring wells must meet the requirements of LAC 33:V.3315.C.

VI.F.3. The Permittee must maintain the structural and mechanical integrity of all wells and provide protection from accidental damage and surface infiltration, and implement a monitoring well inspection schedule. The integrity of wells will be checked during groundwater sampling events. Each well should have a lock and appropriate cap, and the pad, surface concrete, and inner and outer protective casings should be intact. The well identification number should be observed. A site map will be used to confirm that the correct well is being sampled. Damaged wells, well pads, and/or missing caps or locks shall be noted and reported to the site operator or other appropriate personnel. Information pertaining to the

well integrity will be entered onto a Field Data Sheet. Any modifications and/or repairs to any of the wells or piezometers must have prior written approval from the Administrative Authority.

- VI.F.4.** The Permittee must conform to the sampling and analysis requirements of Condition VI.C.3 of this permit and of LAC 33:V.3305.C. Groundwater surface potentiometric maps must be prepared each quarter as outlined in Condition VI.G.6.c.v. of this permit.
- VI.F.5.** The Permittee must also graphically represent (concentration versus time) the values of 1,2-dichloroethane (EDC) and toluene for each sampling point detecting concentrations of each compound during the previous year, after each sampling episode. The graphic interpretations of data must be submitted with the analytical results in the annual report, and should be utilized in all evaluations pertaining to facility impact on groundwater.
- VI.F.6.** Records of all sampling and analytical work (i.e., Quality Assurance/Quality Control (QA/QC) data) must be maintained at the plant site for a minimum of three (3) years.
- VI.F.7.** An annual groundwater report must be submitted each year no later than March 1 as required by LAC 33:V.1529. This report shall summarize all groundwater activities for the preceding calendar year including an evaluation of the monitoring strategy in relation to the direction of groundwater flow and locations of wells associated with the facility. Applicable calculations must also include groundwater and contaminant migration rates, statistical comparisons, and other information as regards corrective actions required by this permit.
- VI.F.8.** The groundwater monitoring system and programs have been developed in accordance with applicable regulatory requirements and Administrative Authority guidance. The statistical procedures are in accordance with LAC 33:V.3315.H and the performance standards of LAC 33:V.3315.I. The statistical method approved by the Administrative Authority is the Mann-Whitney Statistical Method. This statistical analysis procedure has been developed for use under the Detection Monitoring Program (DMP) and the Compliance Monitoring Program (CMP).

The Point of Compliance (POC) wells under the DMP will be statistically evaluated by use of the Mann-Whitney procedure applied to indicator parameters pH, specific conductivity, 1,2-dichloroethane (EDC) and toluene. Other organic compounds will be evaluated by direct comparison of reported concentrations to reporting and concentration limits of each constituent. Point of compliance wells under the CMP will be statistically evaluated using the Mann-Whitney

method for evaluation of pH and specific conductivity and 95 percent confidence interval analysis combined with direct comparison to concentration limits for organic compounds.

VI.F.8.a. Detection Monitoring Program Statistical Methodology

Statistical evaluation of five indicator parameters (1,2-dichloroethane (EDC), toluene, pH, and specific conductance) at point of compliance wells will be conducted using the Mann-Whitney methodology. Evaluation for potential statistically significant increases (one-tailed test) are performed for 1,2-dichloroethane (EDC), toluene, and specific conductivity, while potential statistically significant increases or decreases (two-tailed test) are evaluated for pH. Other organic compounds as listed on Table G.2 will be evaluated by comparison to reporting and concentration limits that have been assigned per the GWSAP and appropriate regulatory standards. Method details are provided below:

VI.F.8.a.i. Mann-Whitney Statistical Method

VI.F.8.a.i.(a). Description

The Mann-Whitney test may be used to test whether the measurements from one population are significantly higher or lower than another population.

The null hypothesis that is being tested is:

H_0 : The populations from which the two data sets have been drawn have the same mean.

The alternative hypothesis is:

H_A : The populations have different means.

VI.F.8.a.i.(b). Procedure

If $n_1 \leq 10$ and $n_2 \leq 10$, then:

$$N = n_1 + n_2$$

Where:

n_1 = The number of observations in sample one

n_2 = The number of observations in sample two

Order the measurements for group 1 and group 2 from the lowest value to the highest value.

Calculate the Mann-Whitney statistic as:

$$U = n_1 n_2 + \frac{n_1(n_1 + 1)}{2} - R_1$$

Where:

R_1 = The sum of the ranks of the observations in sample one

For a one-tailed test, the calculated U is compared with the tabled values (Table B.11, Zar, 1996). If U is greater than the critical value, then Group two (compliance) is greater than Group 1 (background).

For a two-tailed test, you must compute both U and U', where:

$$U' = n_2 n_1 + \frac{n_2(n_2 + 1)}{2} - R_2$$

The larger of U and U' is compared to the critical value in Table B.11 (Zar, 1996). If the calculated U or U' is as great or greater than U there is a statistically significant difference between the two populations.

If $n_1 > 10$ and $n_2 > 10$ or either n_1 or n_2 is greater than 10 the normal Approximation of the Mann-Whitney Test will be used.

$$Z = \frac{U - \frac{n_1 n_2}{2}}{\sqrt{\frac{n_1 n_2 (N + 1)}{12}}}$$

If ties are present:

$$Z = \frac{U - \frac{n_1 n_2}{2}}{\sqrt{\frac{n_1 n_2}{N^2 - N} * \frac{N^3 - N - \sum t}{12}}}$$

Where:

$$\sum t = \sum (t_i^3 - t_i)$$

A statistically significant finding is declared if the absolute value of Z is greater than the tabled value $Z_{1-\alpha/2}$. Significance can be tested at the 80%, 90%, 95% and 98% confidence levels.

VI.F.8.a.i.(c) Organic Constituents

Organic constituents listed on Table G.3 will be compared to reporting and concentration limits. The statistical limit for organics detected in wells under the DMP/CMP will be set equivalent to the Table G.2 concentration limit. Initial detections of organic compounds will not be considered statistically significant unless confirmed by verification resampling. Verification resampling procedures are provided in the GWSAP.

VI.F.8.b. Compliance Monitoring Program Statistical Methodology

Statistical evaluation of indicator parameters (pH and specific conductance) at point of compliance wells under the CMP will be conducted using the Mann-Whitney methodology. Evaluation for potential statistically significant increases (one-tailed test) is performed for specific conductivity while potential statistically significant increases or decreases (two-tailed test) are evaluated for pH. Organic compounds listed on Table G.2 and detected in POC wells under the CMP will be evaluated by comparison to concentration limits (listed on Table G.2) to determine if constituent concentrations exceed the groundwater protection standard (GWPS). Detected organic parameters will be tested for statistical significance by utilizing a 95-percent confidence interval analysis.

The lower 95-percent confidence limit on the mean (LCL) will be compared to a GWPS to decide whether the mean concentration of a constituent of interest has exceeded a GWPS. If the lower 95-percent confidence limit on the mean exceeds the GWPS, then there is statistically significant evidence that the mean concentration of that constituent exceeds the GWPS. Upper 95-percent confidence limit analyses may be applied to constituents in which the 95-percent LCL has previously exceeded a GWPS. If the upper 95-percent confidence limit on the mean occurs lower than the

GWPS, then there is statistically significant evidence that the mean concentration of that constituent has returned to less than the GWPS. The methodology provides a conservative and statistically based comparison of measured data to a set GWPS as well as a definitive decision criteria.

VI.F.8.b.i. Assumptions

The sample data used to construct parametric limits must be normally or transformed-normally distributed. In the case of a transformed-normal distribution, the confidence limit must be constructed on the transformed sample concentration values. In addition to the limit construction, the comparison must be made to the transformed GWPS value. When none of the transformed models can be justified, a nonparametric version of each limit may be utilized.

VI.F.8.b.ii. Distribution

The distribution of the data is evaluated by applying the Shapiro-Wilk or Shapiro-Francia test for normality to the raw data or, when applicable, to the Ladder of Powers (Helsel & Hirsch, 1992) transformed data. The null hypothesis, H_0 , to be tested is:

H_0 : The population has a normal (or transformed-normal) distribution.

The alternative hypothesis, H_A , is:

H_A : The population does not have a normal (or transformed-normal) distribution.

VI.F.8.b.iii. Censored Data

If less than 15 percent of the observations are less than the detection limit, these will be replaced with one-half the method detection limit prior to running the normality test and constructing the confidence limit.

If more than 15 percent, but less than 50 percent, of the data are less than the detection limit, the data's sample mean and standard deviation are adjusted according to the method of Cohen or Aitchison (U.S. EPA, April 1989). This adjustment is made prior to construction of the confidence limit.

If more than 50 per cent of the data are less than the detection limit, these values are replaced with one half the method detection limit and a nonparametric confidence limit is constructed.

VI.F.8.b.iv. Parametric Confidence Limit Procedures

A minimum of four sample values is required for the construction of the parametric confidence limit. The mean, \bar{X} , and standard deviation, S , of the sample concentration values are calculated separately for each compliance well. For each well, the confidence limit is calculated as:

$$\bar{X} \pm t_{(1-\alpha, n-1)} \frac{S}{\sqrt{n}}$$

Where:

S = The compliance point's standard deviation;
 n = The number of observations for the compliance point; and

$t_{(1-\alpha, n-1)}$ is obtained from the Student's t-Distribution (appendix B; U.S. EPA, April 1989) with $(n-1)$ degrees of freedom.

The use of the 95th percentile of the t-Distribution is consistent with the 5 percent α - level of individual well comparisons. If the lower limit is above the compliance limit, there is statistically significant evidence that the constituent exceeds a GWPS.

VI.F.8.b.v. Nonparametric Confidence Limit Procedure

The nonparametric confidence limit procedure requires at least seven observations in order to obtain a one-sided significance level of 1 percent. The observations are ordered from smallest to largest and ranks are assigned separately within each well. Average ranks are assigned to tied values. The critical values of the order statistics are determined as follows.

If the minimum seven observations are used, the critical values are the first and seventh values. Otherwise, the smallest integer, M , is found such that the cumulative

binomial distribution with parameters n (sample size) and probability of success, $p=0.5$, is at least 0.99.

The exact confidence coefficient for sample sizes from 4 to 11 are given by the EPA (Table 6-3; U.S. EPA, April 1989). For larger samples, take as an approximation the nearest integer value to:

$$M = \frac{n}{2} + 1 + Z_{(1-\alpha)} \sqrt{\frac{n}{4}}$$

Where:

$Z_{(1-\alpha)}$ = The $1-\alpha$ percentile from the normal distribution found in Table 4 (appendix B; U.S. EPA, April 1989); and

n = The number of observations in the sample.

Once M has been determined, $(n+1-M)$ is computed and the confidence limits are taken as the order statistics, $X(M)$ and $X(n+1-M)$. These confidence limits are compared to the GWPS has been discussed.

VI.G. GROUNDWATER MONITORING PROGRAMS

Five (5) groundwater monitoring programs are in effect at the facility; the Detection Monitoring Program (DMP), the Compliance Monitoring Program (CMP), the Corrective Action Program (CAP), the Piezometric Levels Program (PLP), and an additional groundwater monitoring program, the Underground Injection Control (UIC). The UIC occurs at the facility separate from the DMP, CMP, CAP and PLP. Deep monitoring well (MW-50) is used to detect any potential water quality effects related to the deep injection well disposal operations at the facility. MW-50 is sampled for constituents listed in Table G.3, and sampling frequencies are listed in Table G.4 of this permit. Notification requirements for MW-50 are in accordance with the DMP program in Condition VI.G.1 of this permit. The deep injection well disposal operations at the facility are regulated by the Louisiana Department of Natural Resources (DNR).

The DMP establishes procedures to determine if there is statistically significant evidence of contamination. Program elements specific to the DMP are presented in the GWSAP and are consistent with LAC 33:V.3317. The CMP and CAP were instituted as per LAC 33:V.3303.A.2 and 3303.A.3 when hazardous constituents were detected in groundwater and work in conjunction to ensure that regulated units are in compliance with the groundwater protection standard under LAC 33:V.3305. Requirements specific to the CMP are in the GWSAP and are consistent with LAC 33:V.3319. Program elements specific to the CAP are listed in the GWSAP, and are consistent with LAC 33:V.3321. The PLP provides

information on groundwater gradients, flow directions, and flow rates as per LAC 33:V.3315.F and 3319.E. Data derived from the PLP also further supplements the CMP and CAP. The PLP is detailed in GWSAP.

VI.G.1. DETECTION MONITORING PROGRAM

A DMP has been established in accordance with LAC 33:V.517.T.4.d, 3303.A.4. The DMP conforms to the requirements of LAC 33:V.3317. A DMP Process Flow Diagram (see Figure 1), prepared in accordance with LAC 33:V.3317, has established the processes, protocols, and criteria that shall be followed during a groundwater monitoring event, particularly an event that evidenced confirmed statistical results following a resampling event for any constituent or parameter at any compliance point monitoring well. The Permittee shall follow the DMP Process Flow Diagram and the detailed process descriptions illustrated by the diagram, included in Figure 1 of this permit, in conjunction with applicable regulatory requirements while conducting a DMP.

VI.G.1.a. Detection Monitoring Program Elements

VI.G.1.a.i. Detection Monitoring Program Groundwater Monitoring System

In accordance with LAC 33:V.3317.B, a groundwater monitoring system is in place as specified under LAC 33:V.3311 and that complies with LAC 33:V.3315.A.2, 3315.B, and 3315.C. As discussed in the GWSAP, the monitoring system is adequate to fulfill the requirements of the DMP. Monitoring wells under the DMP are listed in Table G.4. Wells in the DMP exhibit no confirmed indications of contamination.

VI.G.1.a.ii. Detection Monitoring Groundwater Constituents

In accordance with regulatory requirements and Condition VI.G.1 of this permit, the DMP has been established to determine whether there is statistically significant evidence of contamination of hazardous constituents. The hazardous constituents and concentration limits for the Detection Monitoring Program wells identified under LAC 33:V.3307 and LAC 33:V.3309, and to which the protection standard of LAC 33:V.3305 applies, are provided on Table G.2. The Permittee will conduct the groundwater Detection Monitoring Program for the constituents listed on Table G.2 in accordance with LAC 33:V.3315.G. Constituents consist of volatile organic compounds (VOCs),

semi-volatile compounds (SVOCs), conventionals and indicator compounds (i.e., turbidity).

VI.G.1.a.iii. Detection Monitoring Groundwater Constituent Concentration Limits

Concentration limits for the constituents of interest are listed on Table G.2 and are in accordance with LAC 33:V.3309. The Maximum Contaminant Level (MCL) shall be identified as the concentration limit. If an MCL is not available, then a risk-based concentration limit shall be calculated, in accordance with LAC 33:V.3309.A.1.

VI.G.1.a.iv. DMP Groundwater Monitoring and Data Retention

In accordance with LAC 33:V.3317.C, the Permittee will conduct the groundwater Detection Monitoring Program for those parameters and at a frequency listed on Table G.4, in accordance with LAC 33:V.3317.A and LAC 33:V.3315.G. The Permittee will maintain a record of groundwater analytical data as measured and in a form necessary for the determination of statistical significance in accordance with LAC 33:V.3315.H by means that may include, but are not limited to: retention of hardcopy laboratory analytical reports and maintaining and updating an electronic database suitable for application to commercial or other groundwater monitoring statistical analysis software.

VI.G.1.a.v. Procedures and Methods for Sampling and Analysis

The Permittee will use the procedures and methods presented in the GWSAP, which meet the requirements of LAC 33:V.3315.D and E, for sampling and analysis in accordance with LAC 33:V.3317.E and Condition VI.C.3.

VI.G.1.a.vi. Sampling Frequencies, Notification Requirements, and Reporting Requirements

In accordance with LAC 33:V.3317.D, frequencies for collecting samples and conducting statistical tests to determine whether there is statistically significant evidence of contamination have been specified in accordance with regulatory requirements.

In accordance with LAC 33:V.3317.A-F, the Permittee must analyze samples from all DMP monitoring wells at the compliance points in the Shallow Pervious Zone and the

50-Foot Zone and all DMP monitoring wells in the 200-Foot and 500-Foot Zones and determine whether there is statistically significant evidence of contamination at each monitoring well at the compliance point in accordance with the sampling and reporting schedule contained in Table G.4 and Condition VI.G.6.c.v.

Sampling schedules for detection monitoring wells are provided in Table G.4. Detection monitoring events will be conducted on a semi-annual basis. The Statistical Analysis Plan is included in the approved GWSAP and is described in Condition VI.F.8 of this permit, which complies with LAC 33:V.3315.H and LAC 33:V.3317.F. When analytical results and/or statistical analyses indicate no evidence of contamination, detection monitoring will continue per the normal DMP procedures and schedules. In the event that there is a statistically significant evidence of contamination, then Conditions VI.G.1.a.vii. through VI.G.a.xiv. will be considered and followed as necessary from the date of determination. The date of determination is the date the Permittee completed the statistical analysis.

VI.G.1.a.vii. Determination of Statistical or Otherwise Significant Changes

Groundwater analysis data for indicator parameters, 1,2-dichloroethane (EDC), toluene, pH, and specific conductivity, in DMP wells are statistically evaluated in accordance with LAC 33:V.3317.F and the Statistical Analysis Plan in the GWSAP. Additionally, measured concentrations for DMP wells are evaluated to determine if they exceed established concentration limits. Parameters and concentration limits are provided on Table G.2. The statistical methodology approved by the Administrative Authority is in accordance with LAC 33:V.3315.H and performance requirements of LAC 33:V.3315.I and referenced in Condition VI.F.8.

Indicator parameters toluene and 1,2-dichloroethane (EDC), represent types of waste disposed at the site. 1,2-Dichloroethane (EDC) is considered an early indicator for chlorinated hydrocarbons, is potentially a mobile compound in the subsurface, and is likely to be a first compound detected at the leading edge of a potential plume. Toluene is considered an indicator of aromatic hydrocarbons and is generally a more mobile aromatic hydrocarbon than other species.

VI.G.1.a.viii. Seven (7) Day Notifications for Detection Monitoring Program

In accordance with LAC 33:V.3317.G.1, the Permittee must determine that there is statistically significant evidence of contamination for chemical parameters or hazardous constituents in all DMP monitoring wells at the compliance point in the Shallow Pervious and 50-Foot Zones and all DMP downgradient wells in the 200-Foot Zone and in well WWN in the 500-Foot Zone. If it is determined that there is contamination then, the Permittee must notify the Administrative Authority of this finding in writing within seven (7) calendar days following the date that the determination was made by the Permittee. The notification must indicate what chemical parameters or hazardous constituents have shown statistically significant evidence of contamination and concentrations.

VI.G.1.a.ix. Verification Resampling

Initial statistical or other evidence of contamination is not considered *significant* unless confirmed by resampling, consistent with LAC 33:V.3317.G.3 and/or LAC 33:V.3317.G.6. The Permittee may resample within one month (thirty (30) calendar days) of the determination date and repeat the analysis for those compounds detected. When analytical results and/or statistical analyses indicate no evidence of contamination, detection monitoring will continue per the normal DMP procedures and schedules. If verification resampling confirms the initial determination, then the Permittee will initiate requirements of LAC 33:V.3317.G and Condition VI.G.1.

VI.G.1.a.x. Sampling and Analysis of LAC 33:V.3325 Table 4 Constituents Under the DMP

In accordance with LAC 33:V.3317.G.2, at any detection monitoring well at the compliance point where it is determined in accordance with LAC 33:V.3317.F that there is statistically *significant* evidence of contamination for chemical parameters or hazardous constituents specified pursuant to LAC 33:V.3317.A on Table G.2, then the well will be sampled immediately to determine if LAC 33:V.3325 Table 4 constituents are present, and if so, at what concentration.

In accordance with LAC 33:V.3317.G.3, for any LAC 33:V.3325 Table 4 compounds found in the groundwater analysis, the Permittee may resample within one month (thirty (30) calendar days) of the date the determination is made by the Permittee and repeat the analysis for those compounds detected. If the results of the second analysis confirm the initial results and an Alternate Source Demonstration (ASD), in accordance with LAC 33:V.3317.G.6 is not successful, then these constituents will form the basis for compliance monitoring. If the Permittee chooses not to resample for Table 4 compounds detected in the groundwater analysis, then the Permittee must report the Table 4 constituents found and at what concentrations to the Administrative Authority within seven (7) calendar days following the date of the determination.

VI.G.1.a.xi. Alternate Source Demonstration

In accordance with LAC 33:V.3317.G.6, the Permittee may elect to perform an ASD to determine if a source other than the regulated unit caused the confirmed analytical results or that the detections are an artifact caused by an error in sampling analysis, or statistical evaluation or natural variation in the groundwater.

In accordance with LAC 33:V.3317.G.6.a, if the Permittee intends to perform an ASD to demonstrate that a source other than the unit caused the confirmed analytical results, then the Permittee shall notify the Office of Environmental Services, Waste Permits Division in writing within seven (7) calendar days of the confirmation analysis as stated in Condition VI.G.1.a.x. that the demonstration will be made.

The Permittee shall perform the ASD to demonstrate that a source other than the unit caused the confirmed analytical results in accordance with the DMP Process Flow Diagram (see Figure 1). DMP Process Flow Diagram ASD and Characterization Report steps are as follows:

- Provide seven (7) day notification of intent to perform the ASD Pursuant to LAC 33:V.3317.G.6.a. as provided above.
- Determine if additional site-specific information/data is necessary to evaluate source.

- If additional site-specific information/data is deemed necessary then the Permittee shall develop a work plan for investigating/obtaining additional site-specific information and submit for Administrative Authority approval within sixty (60) calendar days of the determination of the confirmed analytical results.
- Within thirty (30) calendar days of receipt of Administrative Authority approval of the work plan developed as per the prior step, the Permittee shall initiate the activities proposed in the work plan. The Permittee shall prepare and submit a Characterization Report to the Administrative Authority per the approved work plan schedule.
- If additional site-specific information/data is not necessary then within ninety (90) days of the determination of the confirmed analytical results the Permittee shall prepare and submit an ASD report to the Administrative Authority in accordance with LAC 33:V.3317.G.6.b unless an alternate implementation schedule is approved by the Administrative Authority.
- If the Administrative Authority approves the ASD or Characterization Report conclusions then the Permittee will continue the DMP as per applicable regulatory requirements.
- If the Administrative Authority does not approve the ASD or Characterization Report conclusions, then the Permittee will initiate requirements for a permit modification to add the constituent to Table G.2 in accordance with of LAC 33:V.3317.G.4 and Condition VI.G.2. In accordance with LAC 33:V.3317.G.5, the Permittee must justify and alternate concentration limit.
- If the Administrative Authority approves the ASD in writing prior to the deadline for submitting an application for a permit modification as provided in LAC 33:V.3317.G.6.c, then the Permittee shall not be required to submit the application.

VI.G.1.a.xii. Engineering Feasibility Plan

The Permittee shall comply with LAC 33:V.3317.G.5 unless otherwise provided. If an Engineering Feasibility Plan is submitted to Administrative Authority to determine the

nature and extent of the detected concentrations, then within thirty (30) calendar days following the receipt of the written Administrative Authority approval of the Engineering Feasibility Plan, the Permittee shall initiate implementation of the plan. The Permittee shall provide the Administrative Authority with ten (10) calendar days notice of intent to proceed with any field activities or field data acquisition efforts associated with the Engineering Feasibility Plan in order to allow the Administrative Authority to observe the activities. The Permittee shall provide a Characterization Report for Administrative Authority review and approval under the schedule set forth within the Administrative Authority approved Engineering Feasibility Plan. The Characterization Report shall contain the results of the nature and extent delineation of the reported impact along with any applicable conclusions and/or recommendations.

If the results of the Engineering Feasibility Plan nature and extent study determine that no impacts exceed concentration limits listed on Table G.2, in the 200-Foot Zone specifically, then the Permittee shall implement the requirements of LAC 33:V.3317.H, as applicable, and Condition VI.G.1. Alternatively, if the result of the Engineering Feasibility Plan nature and extent study determines that there are impacts exceeding concentration limits in the 200-Foot Zone, then the Permittee shall meet the requirements of LAC 33:V.3321 and Condition VI.G.3.

If the results of the Engineering Feasibility Plan nature and extent study determines that there are impacts exceeding concentration limits, listed on Table G.2, at the base of the 200-Foot Zone, then the Permittee shall meet the requirements of LAC 33:V.3321, and shall submit a work plan within ninety (90) calendar days from the determination date for monitoring the 500-Foot Zone, specifically. The Permittee shall implement the work plan within thirty (30) calendar days from receipt of the written Administrative Authority approval of the work plan. The Permittee shall provide the Administrative Authority with ten (10) days notice of intent to proceed with any field activities or field data acquisitions associated with the work plan in order to allow the Administrative Authority to observe the activities. The Permittee shall provide a report for Administrative Authority review and approval under the schedule set forth within the Administrative Authority approved work plan. The report shall contain the results obtained from the execution of the work plan including but not limited to data

acquired, as built diagrams, conclusions and recommendations, as applicable.

VI.G.1.a.xiii. Initiation of Compliance Monitoring Program

Where it is determined pursuant to LAC 33:V.3317.F that there is statistically significant evidence of contamination for chemical parameters or hazardous constituents specified in LAC 33:V.3317.A and on Table G.2 or additional compounds in LAC 33:V.3325 Table 4 at any detection monitoring well and an ASD in accordance with LAC 33:V.3317.G.6 is not successful or submitted, then in accordance with LAC 33:V.3317.G.4, an application for a permit modification to incorporate the subject well/s into the current CMP or establish an updated CMP meeting the requirements of LAC 33:V.3319 will be submitted to the Administrative Authority. The application will include the following information:

- In accordance with LAC 33:V.3317.G.4.a, identification of the concentration of any LAC 33:V.3325 Table 4 constituent detected in the groundwater;
- In accordance with LAC 33:V.3317.G.4.b, any proposed changes to the groundwater monitoring system at the facility necessary to meet the requirements of LAC 33:V.3319;
- In accordance with LAC 33:V.3317.G.4.c, any proposed additions or changes to the monitoring frequency, sampling and analysis procedures or methods, or statistical methods used at the facility necessary to meet the requirements of LAC 33:V.3319; and
- In accordance with LAC 33:V.3317.G.4.d, a proposed concentration limit under LAC 33:V.3309.A.3.a or b, or notice of intent to seek an alternate concentration limit in LAC 33:V.3309.B.

VI.G.1.a.xiv. DMP Modification

In accordance with LAC 33:V.3317.H, should the Permittee determine that the DMP no longer satisfies the requirements of LAC 33:V.3317, then within ninety (90) days, an application for a permit modification to make any appropriate changes to the program will be provided to the Administrative Authority.

VI.G.2. COMPLIANCE MONITORING PROGRAM

A CMP has been established in accordance with LAC 33:V.517.T.4.e and 3303.A.1. The CMP conforms to the requirements of LAC 33:V.3319. A CMP Process Flow Diagram, included in Figure 2 of this Permit, has been prepared in accordance with LAC 33:V.3319. The Flow Diagram establishes the processes, protocols, and criteria that shall be followed during a groundwater monitoring event that evidenced confirmed new constituents that exceeded Concentration Limits following a resampling event for any CMP well at the facility regardless of the zone that is being monitored. All currently impacted POC wells will follow the Process Flow Diagram for the CMP.

VI.G.2.a. Compliance Monitoring Program Elements

The CMP was established to determine whether the regulated units are in compliance with the groundwater protection standard under LAC 33:V.3305. The CMP incorporates the following program elements developed and carried out per applicable regulatory requirements.

VI.G.2.a.i. Compliance Monitoring Program Groundwater Monitoring System and Point of Compliance

In accordance with LAC 33:V.3319.B and LAC 33:V.3319.A.3, a CMP groundwater monitoring system is in place at the compliance point as specified under LAC 33:V.3311 and that complies with LAC 33:V.3315.A.2, B, and C. The point of compliance is defined and addressed in the GWSAP and Condition VI.D. Presently, there are no 200-Foot Zone CMP wells.

The monitoring system is adequate to fulfill the requirements of the CMP. Monitor wells under the CMP are listed on Table G.4.

VI.G.2.a.ii. Compliance Monitoring Program Groundwater Monitoring Constituents

In accordance with regulatory requirements, the CMP has been established to determine if there is statistically significant evidence of increased contamination for any Table G.2 parameter in accordance with LAC 33:V.3319.D and H and Condition VI.F.8. of this permit and will determine if any concentrations limits assigned under LAC 33:V.3309 are being exceeded at any CMP monitoring well. In accordance with LAC 33:V.3319.A.1, a list of hazardous constituents identified under LAC 33:V.3307 is provided on Table G.2. Constituents

consist of VOCs, SVOCs, conventionals and indicator compounds (i.e., turbidity). Table G.4 lists the CMP wells, sampling frequencies and constituent groups.

VI.G.2.a.iii. Annual Sampling and Analysis of LAC 33:V.3325 Table 4 Constituents Under the CMP

In addition to the groundwater monitoring constituents listed on Table G.2, the Permittee will sample all CMP wells at the POC for LAC 33:V.3325 Table 4 constituents on an annual basis in accordance with LAC 33:V.3319.G and Condition VI.G.2.a.x.(a). to determine whether additional hazardous constituents are present and, if so, at what concentration. If the parameters or constituents in the groundwater result from LAC 33:V.3325 Table 4 annual sampling event and they are not already identified in the permit as monitoring constituents and they are confirmed by resampling or if the Permittee chooses not to resample, then the Permittee must add them to the monitoring list in accordance with LAC 33:V.3319.G and Condition VI.G.2.a.xi. If initial detections of LAC 33:V.3325 Table 4 constituents are not confirmed by resampling, then monitoring will continue for Table G.2 constituents for the wells and at the frequencies provided on Table G.4 per the standard CMP in accordance with LAC 33:V.3319.I.4.

VI.G.2.a.iv. CMP Groundwater Monitoring Constituent Concentration Limits

Concentration limits for the constituents of interest listed on Table G.2 have been established in accordance with LAC 33:V.3309 and LAC 33:V.3319.A.2. Concentration limits for constituents not listed on Table G.2 have been set equivalent to site specific background levels in accordance with LAC 33:V.3309.A.1. Notification requirements must be in accordance with Condition VI.G.2.a.x and xi.

VI.G.2.a.v. Compliance Period

The Permittee will comply with the compliance period required under LAC 33:V.3319.A.4 and defined in accordance with LAC 33:V.3313. In accordance with LAC 33:V.3313, the compliance period during which the groundwater protection standard of LAC 33:V.3305 applies is defined as when concentration limits on Table G.2 have been achieved or, as per LAC 33:V.3313.C, when the facility has demonstrated that corrective action has been effective and the groundwater protection standard of LAC 33:V.3305 has not been exceeded

for a period of three (3) consecutive years, or as required by the Administrative Authority.

VI.G.2.a.vi. CMP Groundwater Monitoring and Data Retention

In accordance with LAC 33:V.3319.C.1, the Permittee will conduct the CMP for those parameters and at a frequency as presented on Table G.4 in accordance with LAC 33:V.3315.G. In accordance with LAC 33:V.3319.C.1, the Permittee will maintain a record of groundwater analytical data as measured and in a form necessary for the determination of statistical significance in accordance with LAC 33:V.3315.H by means that may include, but are not limited to: retention of hardcopy laboratory analytical reports and maintaining and updating an electronic database suitable for application to commercial or other groundwater monitoring statistical analysis software.

VI.G.2.a.vii. Procedures and Methods for Sampling and Analysis

The Permittee will use the procedures and methods presented in the GWSAP and Condition VI.C.3., which meet the requirements of LAC 33:V.3315.D and E, for sampling and analysis in accordance with LAC 33:V.3319.C.

VI.G.2.a.viii. CMP Sampling Frequencies, Notification Requirements, and Reporting Requirements

A specific groundwater sampling program and schedule has been developed in accordance with LAC 33:V.3319.C.1 where the owner or operator must conduct a sampling program for each chemical parameter or hazardous constituent in accordance with LAC 33:V.3315.G. All CMP groundwater monitoring wells will be sampled and reported on a semi-annual basis in accordance with Condition VI.G.6.c.v. and Table G.4 and for the approved constituents listed on Table G.2 of this permit. Notification requirements will be in accordance with Condition VI.G.2.a.x. of this permit.

VI.G.2.a.ix. Determination of Compliance with Concentration Limits / CMP Statistical Analysis

Groundwater analysis data for indicator parameters, 1,2-dichloroethane (EDC), toluene, pH, and specific conductivity, in any CMP wells at the point of compliance are statistically evaluated in accordance with LAC 33:V.3319.D and the Statistical Analysis Plan detailed the GWSAP and in Condition VI.F.b. of this permit. Additionally, measured concentrations for POC wells are evaluated to determine if they

exceed established concentration limits. Parameters and concentration limits are provided on Table G.2. The statistical analysis methodology is outlined in Condition VI.F.8 and the GWSAP.

In accordance with LAC 33:V.3319.D, the Permittee will determine whether there is statistically significant evidence of increased contamination for any sampled Table G.2 constituents for CMP wells at the POC pursuant to LAC 33:V.3319.A. The test for increased contamination will compare data collected at the compliance point to concentration limits developed in accordance with LAC 33:V.3309 and will determine whether there is statistically significant evidence that data collected at the compliance point occurs at a level greater than the compliance limit in accordance with LAC 33:V.3319.H and Condition VI.G.2.a.iv. of this permit. When analytical results and/or statistical analyses indicate no evidence of increased contamination or compliance limit exceedances at the POC, compliance monitoring will continue per the normal CMP procedures and schedules. In the event that there is evidence that a concentration limit has been exceeded, at any CMP monitoring well at the POC, then Conditions VI.G.2.a.x. through VI.G.2.a.xvi. will be considered and followed as necessary from the date of determination.

VI.G.2.a.x. Seven (7) Day Notifications for the Compliance Monitoring Program

VI.G.2.a.x.(a). In accordance with LAC 33:V.3319.G, Compliance Monitoring Program, the Permittee must analyze samples from all monitoring wells at the compliance point for all constituents listed in LAC 33:V.3325.Table 4 at least annually to determine whether additional hazardous constituents are present and if so, at what concentration.

VI.G.2.a.x.(b). If the Permittee finds LAC 33:V.3325.Table 4 constituents in the groundwater that are not already identified in the permit as monitoring constituents, then:

VI.G.2.a.x.(b)(i). The Permittee must notify the Administrative Authority of this finding in writing within seven (7) calendar days following the date that the determination was made by the Permittee. The notification must indicate what chemical parameters or hazardous constituents have been identified that are not already within the permit as monitoring constituents, or

VI.G.2.a.x.(b)(ii). Alternatively, the Permittee may elect to resample within one month (thirty (30) calendar days) and repeat the LAC 33:V.3325.Table 4 analyses for those newly identified compounds detected. If the second analysis confirms the presence of new constituents, the Permittee must report the concentrations of these additional constituents to the administrative authority within seven (7) calendar days following the date that the new constituents were determined confirmed by the resample analysis.

VI.G.2.a.x.(c). In accordance with LAC 33:V.3319.H, if the Permittee determines that any concentration limits under LAC 33:V.3309 are being exceeded at any CMP monitoring well at the point of compliance, the Permittee must notify the Office of Environmental Services, Waste Permits Division of this finding in writing within seven (7) calendar days following the date that the determination was made by the Permittee. The notification must indicate which concentration limits have been exceeded.

VI.G.2.a.x.(d). Notifications required by LAC 33:V.3317.G, 3319.G and 3319.H may be included within the same notification document submittal.

VI.G.2.a.xi. Thirty (30) Day Notification

In accordance with LAC 33:V.3319.G, if the Permittee determines that there are LAC 33:V.3325.Table 4 constituents in the groundwater from monitoring wells at the compliance point that are not already identified in the permit as monitoring constituents, then the Permittee may resample within thirty (30) calendar days from the date the determination is made by the Permittee. If the Permittee chooses not to resample the Permittee must report the concentrations of these parameters or constituents to the Administrative Authority within seven (7) calendar days following the date that the new constituents were determined by the Permittee. If the parameters or constituents in the groundwater result from a LAC 33:V.3325.Table 4 annual sampling event and they are not already identified in the permit as monitoring constituents, then the Permittee must add them to the facility monitoring list.

In accordance with LAC 33:V.3319.G, if the Permittee determines that there are LAC 33:V.3325 Table 4 constituents in the groundwater from any CMP monitoring well at the point of compliance that are not already identified in the permit as

monitoring constituents, then the Permittee may elect to resample within one month (thirty (30) calendar days) and repeat the LAC 33:V.3325 Table 4 analysis for those newly identified compounds detected. If the second analysis confirms the presence of new constituents, the Permittee must report the concentrations of these additional constituents to the Administrative Authority within seven (7) calendar days following the resampling date of the determination.

VI.G.2.a.xii. Verification Resampling

In accordance with LAC 33:V.3319.I, the Permittee may perform verification resampling of Table G.2 constituents that have been determined to initially exceed groundwater concentration limits as defined on Table G.2 in accordance with LAC 33:V.3309. Verification resampling will occur within one month (thirty (30) calendar days) of the determination. If the initial results are not confirmed by verification resampling, then the CMP will continue per the standard program. If the initial results are confirmed by resampling then consideration and execution of the listed CMP response items will continue as necessary within the indicated schedules from the date of determination.

VI.G.2.a.xiii. Alternate Source Demonstration

Pursuant to LAC 33:V.3319.I, the Permittee may elect to perform an ASD to determine if a source other than the regulated unit caused the confirmed analytical results or that the detections are an artifact caused by an error in sampling analysis, or statistical evaluation or natural variation in the groundwater. In accordance with LAC 33:V.3319.I.1, if the Permittee intends to perform an ASD to demonstrate that a source other than the unit caused the confirmed analytical results, then the Permittee shall notify the Office of Environmental Services, Waste Permits Division in writing within seven (7) calendar days that the demonstration will be made under LAC 33:V.3319.I. The Permittee shall perform the ASD to demonstrate that a source other than the unit caused the confirmed analytical results; see the CMP Process Flow Diagram included in Figure 2 of this permit. The CMP Process Flow Diagram and ASD steps are as follows:

- Provide seven (7) day notification of intent to perform the ASD in accordance with LAC 33:V.3319.I.1.
- Determine if additional site-specific information/data are necessary to evaluate source.

- If additional site-specific information/data are deemed necessary then the Permittee shall develop a work plan for investigating/obtaining additional site-specific information and submit for Administrative Authority approval within sixty (60) calendar days of the determination of the confirmed analytical results.
- Within thirty (30) calendar days of receipt of Administrative Authority approval of the work plan developed as per the prior step, the Permittee shall initiate the activities proposed in the work plan.
- The Permittee shall prepare and submit a Characterization Report to the Administrative Authority per the approved work plan schedule.
- If additional site-specific information/data is not necessary then within ninety (90) days of the determination of the confirmed analytical results the Permittee shall prepare and submit an ASD report to the Administrative Authority in accordance with LAC 33:V.3319.I.2 unless an alternate implementation schedule is approved by the Administrative Authority.
- If the Administrative Authority approves the ASD or Characterization Report conclusions then the Permittee will continue the CMP as per applicable regulatory requirements and the GWSAP.
- If the Administrative Authority does not approve the ASD or Characterization Report conclusions, then the Permittee will initiate requirements of a permit modification in accordance with LAC 33:V.3319.H.2, as applicable.
- If the Administrative Authority approves the ASD in writing prior to the deadline for submitting an application for a permit modification as provided in LAC 33:V.3319.I.3 and 3319.H.2, then the Permittee shall not be required to submit the application.

VI.G.2.a.xiv. Engineering Feasibility Plan

The Permittee shall comply with LAC 33:V.3319.H.2 unless otherwise provided. If an Engineering Feasibility Plan is submitted, then within thirty (30) calendar days of receipt of the written Administrative Authority approval of the Engineering Feasibility Plan, the Permittee shall initiate implementation of the plan. The Permittee shall provide the Administrative Authority

with ten (10) calendar days a notice of intent to proceed with any field activities or field data acquisitions associated with the Engineering Feasibility Plan in order to allow the Administrative Authority to observe the activities as provided. The Permittee shall provide a characterization report for Administrative Authority review and approval under the schedule set forth within the Administrative Authority approved Engineering Feasibility Plan (i.e., work plan). The Characterization Report shall contain the results of the nature and extent delineation of the reported impact along with any applicable conclusions and/or recommendations.

If the results of the Engineering Feasibility Plan nature and extent study determine that no constituents exceeding concentration limits occur in the 200-Foot Zone, then the Permittee shall implement the requirements of a permit modification in accordance with LAC 33:V.3319.I.3 and 4, as applicable. If the result of the Engineering Feasibility Plan nature and extent study determines that there are impacts exceeding concentration limits in the 200-Foot Zone, then the Permittee shall meet the requirements of LAC 33:V.3321 and Condition VI.G.3. If the result of the Engineering Feasibility Plan nature and extent study determines that there are impacts exceeding concentration limits at the base of the 200-Foot Zone, then the Permittee shall meet the requirements of LAC 33:V.3321, and shall submit a work plan within ninety (90) calendar days from the determination date for monitoring the 500-Foot Zone. The Permittee shall implement the work plan within thirty (30) calendar days from receipt of the written Administrative Authority approval of the work plan. The Permittee shall provide the Administrative Authority with ten (10) days a notice of intent to proceed with any field activities or field data acquisitions associated with the work plan in order to allow Administrative Authority to observe the activities. The Permittee shall provide a report for Administrative Authority review and approval under the time schedule set forth within the approved work plan. The report shall contain the results obtained from the execution of the work plan including but not limited to data acquired, as built diagrams, conclusions and recommendations, as applicable.

VI.G.2.a.xv. Initiation of Correction Action Program

Pursuant to LAC 33:V.3319.D, if any concentration limits listed on Table G.2 are confirmed exceeded at any monitoring well at the POC and an ASD is not successful (approved by the Administrative Authority) or not submitted, then per LAC 33:V.3319.H.2 an application for a permit modification to modify the existing CAP will be submitted within 180 days by the Permittee to the Administrative Authority. In accordance with LAC 33:V.3319.D,

if any concentration limits listed on Table G.2 are confirmed exceeded at any CMP monitoring well at the POC and an ASD is not successful (approved by the Administrative Authority) or not submitted, then per LAC 33:V.3319.H.2 an application for a permit modification to modify the existing CAP will be submitted within 180 days. If an engineering feasibility study has been previously submitted to the Administrative Authority under LAC 33:V.3317.H.5, then the Permittee will have ninety (90) days to submit an application for a permit modification to modify the existing CAP. The application will include at a minimum the following information:

- In accordance with LAC 33:V.3319.H.2.a, a detailed description of corrective actions that will achieve compliance with the groundwater protection standard specified on Table G.2 established in accordance with LAC 33:V.3319.A;
- In accordance with LAC 33:V.3319.H.2.b, a plan for a groundwater monitoring program that will demonstrate the effectiveness of the corrective action based on the current CMP or modified CMP developed to meet the requirements of LAC 33:V.3319.

VI.G.2.a.xvi. CMP Modification

If it is determined that the CMP no longer satisfies the requirements of LAC 33:V.3319, then within ninety (90) days, an application for a permit modification to make any appropriate changes to the program will be provided to the Administrative Authority.

VI.G.3. CORRECTIVE ACTION PROGRAM

The CAP was established in accordance with LAC 33:V.517.T.4.f, LAC 33:V.3303.A.2 and 3319.H to ensure that regulated units are in compliance with the groundwater protections standard under LAC 33:V.3305. The CAP conforms to the requirements of LAC 33:V.3321. The CAP consists of a network of recovery wells and related piezometers. Presently, there are no 200-Foot Zone CAP wells. CAP wells and monitoring requirements, frequencies and concentration limits are provided on Table G.2 and Table G.4. The CAP is in accordance with LAC 33:V.3321.B. Data derived from DMP, CMP and other PLP wells are also used to supplement and aid in the evaluation of the effectiveness of the CAP. Specific elements of the CAP are as follows:

VI.G.3.a. Corrective Action Program Groundwater Monitoring Constituents

In accordance with regulatory requirements the CAP has been established to ensure that regulated units are in compliance with the groundwater protections standard under LAC 33:V.3305. In accordance with LAC 33:V.3321.A.1, a list of hazardous constituents, identified under LAC 33:V.3307 is provided on Table G.2. Constituents consist of VOCs, SVOCs and conventionals. CAP wells, sampling frequencies and Table G.2 constituent groups to be sampled each monitoring event are summarized on Table G.4.

VI.G.3.b. CAP Groundwater Monitoring Constituent Concentration Limits

Concentration limits for the constituents of interest listed on Table G.2 have been established in accordance with LAC 33:V.3309 and LAC 33:V.3321.A.2. Concentration limits for constituents not listed on Table G.2 have been set equivalent to site specific background levels in accordance with LAC 33:V.3309.A.1.

VI.G.3.c. Point of Compliance

A POC for the Permittee has been delineated for the Shallow Pervious Zone and the 50-Foot Zone and are in accordance with LAC 33:V.3321.A.3.

VI.G.3.d. Compliance Period

The Permittee will comply with the compliance period required under LAC 33:V.3321.A.4 and defined as per LAC 33:V.3313 and LAC 33:V.3321.F. In accordance with LAC 33:V.3313, the compliance period during which the groundwater protection standard of LAC 33:V.3305 applies is defined as when the concentration limits on Table G.2 have been achieved or, as per LAC 33:V.3313.C, when the facility has demonstrated that corrective action has been effective and the groundwater protection standard of LAC 33:V.3305 has not been exceeded for a period of three (3) consecutive years.

In accordance with LAC 33:V.3321.F, the Permittee will continue corrective action measures during the compliance period to the extent necessary to ensure that the groundwater protection standard is not exceeded. If the Permittee is conducting corrective action at the end of the compliance period, the Permittee will continue that corrective action for as long as necessary to achieve compliance with the groundwater protection standard. The Permittee may terminate corrective action measures taken beyond the period equal to the life of the facility (including the closure period) if it can be demonstrated that based on data from the groundwater monitoring program under LAC 33:V.3321.D the

groundwater protection standard of LAC 33:V.3305 has not been exceeded for a period of three (3) consecutive years.

VI.G.3.e. Corrective Action Program Groundwater Monitoring System

The CAP consists of a network of recovery wells and related piezometers. There are no 200-Foot Zone CAP wells. CAP wells and monitoring requirements, frequencies and concentration limits are listed on Table G.2 and Table G.4. Data derived from DMP, CMP and other PLP wells are used to supplement and aid in the evaluation of the effectiveness of the CAP.

VI.G.3.f. Adjustments to the CAP

As corrective actions progress and are evaluated, it is anticipated that adjustments to the system will be necessary to maintain optimal efficiency. Such adjustments include deactivation of current recovery wells as remediation progresses, conversion of monitor well to recovery well, reactivation of recovery wells, adjustments to recovery rates of individual recovery wells, and modification to the sampling program. If adjustments are deemed necessary or appropriate following semi-annual and annual CAP evaluations, such changes will be proposed in the annual corrective action report and implemented upon Administrative Authority approval. Such a process allows fluidity of the corrective action system and allows efficient and effective adjustment to changing conditions over time as remedial measures progress.

VI.G.3.g. CAP Modification

If it is determined that the CAP no longer satisfies the requirements of LAC 33:V.3321, then within ninety (90) days, an application for a permit modification to make any appropriate changes to the program will be provided to the Administrative Authority.

VI.G.4. PIEZOMETRIC LEVELS PROGRAM

In accordance with LAC 33:V.3315.F, the groundwater surface elevation is determined each time groundwater is sampled from a specific well. Measurements are made in sampled wells prior to purging following the procedures outlined in the approved GWSAP. Water level measurements are to be recorded for all groundwater monitoring wells and piezometers prior to purge and sample activities, during each semi-annual groundwater monitoring event as part of the Piezometric Levels Program (PLP). The PLP has been established to measure potentiometric surface gradients and groundwater flow in the monitored zones in accordance with LAC 33:V.3315.F and 3319.E. Additionally, the PLP is used to aid in the evaluation of the CAP. PLP wells are noted on Table G.4.

Should a change in the groundwater flow be observed it will be determined if the upgradient wells will be affected by potential contaminants from the disposal units and whether the downgradient wells still satisfy "point of compliance" monitoring. If necessary, a redesign of the monitoring system will be proposed and submitted to the Administrative Authority for approval.

VI.G.5. UNDERGROUND INJECTION CONTROL (UIC)

The Underground Injection Control (UIC) groundwater monitoring program, occurs at the facility separate from the DMP, CMP, CAP and PLP. Deep monitoring well (MW-50) is used to detect any potential water quality effects related to the deep injection well disposal operations at the facility. MW-50 parameters and sampling frequencies are provided on Table G.4 of this permit. Specific monitoring constituents are listed on Table G.3 of this permit. Notification requirements for MW-50 are in accordance with the DMP in Condition VI.G.1 of this permit. Laboratory analytical results are submitted with semi-annual groundwater monitoring reports.

VI.G.6. GROUNDWATER MONITORING ELEMENTS APPLICABLE TO ALL PROGRAMS

LAC 33:V.3305 through 3315 contains the groundwater monitoring requirements applicable to all LAC 33:V.3303 defined monitoring programs (DMP, CMP, CAP and UIC MW-50).

VI.G.6.a. Groundwater Monitoring System

LAC 33:V.3305.B, 3315.A, and 3315.C requires a groundwater monitoring system able to monitor water moving both towards (upgradient) the facility and leaving the facility (downgradient) and with wells located to intercept potential contamination at the earliest possible occurrence. Well locations and completion depths must be selected to assure all possible contaminant flow-paths are monitored with well construction that meets applicable requirements and guidelines (e.g. DOTD, 2003).

A comprehensive groundwater monitoring network of upgradient, interior, downgradient, and point of compliance (POC) wells have been in place throughout the facility's history with upgrades and revisions completed as necessary. Additionally, a network of active groundwater recovery wells is in place and provides hydraulic control, restricting flow of impacted and/or potentially impacted groundwater beyond the POC and offsite. Groundwater monitoring occurs in multiple water-bearing zones including the Shallow Pervious Zone (SPZ), the 50-Foot Zone, the 200-Foot Zone (Upper and Lower), and the 500-Foot Zone. Groundwater monitoring wells have been installed following applicable requirements and guidelines in effect at the time of installation. Well integrity inspections are conducted on a routine basis. The groundwater monitoring system meets

regulatory requirements and is adequate for monitoring all units at the facility.

VI.G.6.b. Groundwater Sampling and Analysis Plan

In accordance with LAC 33:V.3305, 3315.D, and 3315.E, the Permittee shall develop and adhere to a groundwater sampling and analysis plan (GWSAP) (see Condition VI.C.3) and shall immediately advise the Administrative Authority when significant changes in groundwater quality are determined and verified.

In accordance with LAC 33:V.3305 and 3315, the GWSAP covers all facets of groundwater monitoring from sample collection procedures to laboratory analysis to data review and reporting. Specific procedures to advise the Administrative Authority when significant groundwater quality changes occur have been developed for each individual groundwater monitoring program.

VI.G.6.c. Groundwater Monitoring Constituents and Concentration Limits

VI.G.6.c.i. Monitoring Constituents

The constituents and concentration limits for the groundwater monitoring programs identified under LAC 33:V.3307 and LAC 33:V.3309; and to which the protection standard of LAC 33:V.3305 apply are provided as Table G.2. The Permittee will monitor for indicator parameters, waste constituents, or reaction products that provide a reliable indication of the presence of hazardous constituents in groundwater per LAC 33:V.3317.A, 3319, 3321 and 3322. Monitor wells will be sampled for the Table G.2 constituents or variable subsets depending on individual monitoring programs and under which program specific wells occur (i.e. DMP, CMP, CAP). Point of compliance wells under the CMP will also be monitored for LAC 33:V.3325 Table 4 constituents on an annual basis. Constituents to be monitored for each well and conditions under which subsets or additional parameters are monitored are discussed under the specific program sections and summarized on Table G.4.

VI.G.6.c.ii. Concentration Limits

Concentration limits for the constituents of interest listed on Table G.2 have been established per LAC 33:V.3309. Concentration limits for constituents not listed on Table G.2 have been set equivalent to site specific background levels per LAC 33:V.3309.A.1.

The Reporting limits (RLs) (lowest values to which concentrations will be reported) for Table G.2 constituents are in accordance with method detection limits (MDLs) [where the MDL is defined by 40 CFR (7-1-95 Edition) Part 136, Appendix B as the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte]. The MDL is the lowest concentration a method can “see” in a sample that has gone through the method preparation process. Method detection limits are method, matrix, instrument and analyst specific (WDNR, 1996). Reporting limits are not recommended to be set equivalent to MDLs due to the increased potential for false positives and uncertainty inherent in the derivation (see Gibbons, 1994; Gibbons and Coleman, 2001 for further discussion). While an MDL is a statistically derived value representing the lowest detectable concentration, the MDL is not the lowest concentration that can be repeatedly and accurately measured, which is a value greater than the MDL. The MDL concentration does not imply accuracy or precision of the quantitative measurement, particularly for production laboratories where there are multiple sources of method variation, including multiple instruments, instrument calibrations, and instrument operators; and for methods that require preparation steps, where there are multiple preparation events and staff (Childress et al. USGS, 1999). In practice, reporting limits are typically 3 to 10 times or more than the MDL. Therefore, reporting limits greater than MDLs have been assigned. Reporting limits are equivalent to or less than the specific constituent concentration limits and consider historic data and laboratory recommendations. In no case is a reporting limit greater than the Table G.2 concentration limit.

VI.G.6.c.iii. Sampling Frequency/Schedule

In accordance with LAC 33:V.3315.G, data on each indicator parameter and on each hazardous constituent specified in the permit will be collected from background wells and wells in detection monitoring or where appropriate in compliance monitoring. The number and kinds of samples collected to establish background shall be appropriate for the form of statistical test employed, following generally accepted principles. The sample size shall be as large as necessary to ensure with reasonable confidence that a contaminant release to groundwater from the facility will be detected.

A recommended sampling schedule, frequency and sequence have been developed for semi-annual sampling events in accordance with LAC 33:V.3315.G and 3315.G.2. The sequence has been

developed by considering several factors that include: the groundwater monitoring program in effect for a particular well (DMP, CMP, CAP and PLP), wells to be sampled that event (see Table G.4), well sensitivity (e.g. POC or 200-Foot Zone well), hydraulic position (upgradient versus downgradient), and degree of impact (least impacted versus most impacted wells). Overall, wells are purged and sampled from upgradient to downgradient and from non-/least impacted wells to most impacted wells. Wells sampled and parameters analyzed for each semi-annual event are listed in Table G.4. An extensive historical database and monitoring history as well as the continued monitoring program is appropriate for establishment and continued monitoring of background appropriate for the statistical tests employed in each program. The monitoring system and programs are sufficient to ensure with reasonable confidence that a contaminant release to groundwater will be detected. The recommended sampling schedule and sequence is subject to change or revision based on site conditions, required parameters and sampling frequency, or any other potential issues related to the collection and analysis of necessary samples.

VI.G.6.c.iv. Statistical Methods

The groundwater monitoring system and programs have been developed in accordance with applicable regulatory requirements. Applicable statistical procedures are discussed in the GWSAP and Condition VI.F.8 and are in accordance with LAC 33:V.3315.H and the performance standards in LAC 33:V.3315.I.

VI.G.6.c.v. Groundwater Monitoring Submittal Schedule and Data Retention

In accordance with LAC 33:V.3315.J, the groundwater monitoring data, including actual levels of constituents, must be maintained in the facility operating record. In accordance with LAC 33:V.3315.K, the Permittee will maintain records from all required groundwater monitoring wells and associated groundwater surface elevations for the active life of the facility, including corrective action and post-closure care periods.

VI.G.6.c.vi. Semi-Annual Groundwater Reporting Requirements

VI.G.6.c.vi.(a). Standard groundwater monitoring events will be conducted on a semi-annual frequency. The semi-annual report shall, at a minimum, contain:

- Laboratory analytical results;

- Groundwater surface potentiometric maps;
- Statistical analysis results for point of compliance (POC) and/or other required wells. Statistical analyses will be performed in accordance with GWSAP and Condition VI.F.8 and the applicable monitoring program requirements for each well of interest;
- Determination if measured concentrations in point of compliance (POC) and/or other required wells exceed concentration limits for constituents listed in Table G.2;
- Field forms and chain of custodies.

VI.G.6.c.vi.(b). Semi-annual groundwater monitoring reports containing the information requirements of GWSAP and LAC 33:V.3317 and 3319 shall be submitted to the Administrative Authority as follows:

- Semi-annual groundwater monitoring reports containing data and information (i.e. statistical results, maps, etc.) shall be submitted to the Administrative Authority on or before the end of the month following the end of the semi-annual sampling event, in accordance with LAC 33:V.3317 and 3319. Submittal timeframes for groundwater monitoring data and reports related to groundwater monitoring are provided below:

SEMI-ANNUAL EVENT	MONITORING REPORT DUE DATE
FIRST QUARTER	APRIL 30
THIRD QUARTER	OCTOBER 31

- The transmittal letter accompanying the semi-annual groundwater monitoring report shall identify the date that the Permittee received the completed analytical data (including electronic deliverables) from the laboratory as well as the determination date.

VI.G.6.c.vi.(c). It is anticipated that semi-annual groundwater monitoring events will occur during the second and fourth quarters of each year. The sampling quarters are subject to change as conditions dictate, with prior approval from the Administrative Authority. The transmittal letter

accompanying the groundwater monitoring report shall identify the date the Permittee received the completed analytical data (including electronic deliverables) from the laboratory as well as the determination date, which is the date the Permittee completed the statistical analysis.

- VI.G.6.c.vi.(d).** Semi-Annual Leachate Reports shall be submitted to the Administrative Authority. These reports shall include recovered leachate volumes for the six (6) month period, leachate analytical data, field logs and copies of sample chain of custodies from the first semi-annual sampling event. Volumes of water covered from the recovery wells system for the six (6) month period and graphs of recovered water volumes for the past three (3) years should be included. A separate notification and report should be submitted to the Administrative Authority if any leachate releases into the leak detection system is observed.

VI.H. ANNUAL REPORT

- VI.H.1.** In accordance with LAC 33:V.1529 and LAC 33:V.3321.D, an annual report must be submitted to the Administrative Authority no later than March 1 of each year. The annual groundwater report shall, at a minimum, contain:

- A summary of all groundwater related activities for the previous year;
- Time series plots for 1,2-dichloroethane (EDC) and toluene for wells with detections during the previous year;
- Immiscible layers and total depth survey results;
- Evaluation of the monitoring strategy;
- Groundwater and contaminant migration rates;
- In accordance with LAC 33:V.3321.G, the annual groundwater report should contain information pertaining to the corrective action effectiveness which shall at a minimum contain:

VI.H.1.a. a facility map showing all detection, compliance, and corrective action wells;

VI.H.1.b. a table showing the well number, well depth, screened interval, zone monitored, well diameter and casing material

- for all detection, compliance, and corrective action wells and the type of pump used if the well is a recovery well,
- VI.H.1.c.** a summary of analytical data for all monitor, assessment, and recovery wells for the reporting period;
- VI.H.1.d.** discussion on any significant changes in the analytical data from all detection, compliance, and corrective action wells for the reporting period;
- VI.H.1.e.** contaminant concentration isopleths for each monitored zone for the reporting period;
- VI.H.1.f.** water level measurements and potentiometric surface maps for each monitored zone for the reporting period;
- VI.H.1.g.** total volume of liquids pumped and volume of contaminants removed for each well for the reporting period and cumulative volumes to date;
- VI.H.1.h.** discussion on the down time for any recovery well or pump for the reporting period and actions taken by the facility to return the well or pump to service;
- VI.H.1.i.** concentration versus time graphs for all monitoring wells used to determine the effectiveness of the recovery program; and
- VI.H.1.j.** discussion on the effectiveness and progress of remedial activities.

VI.I. CORRECTIVE ACTION

VI.I.1. Corrective Action Program

The Corrective Action Program (CAP) was established in accordance with LAC 33:V.517.T.4.f, LAC 33:V.3303.A.2 and 3319.H to ensure that all units are in compliance with the groundwater protection standard under LAC 33:V.3305. The CAP conforms to the requirements of LAC 33:V.3321 and 3322. The CAP consists of a network of recovery wells and related piezometers and a groundwater monitoring system. Presently, there are no 200-Foot Zone CAP wells. CAP wells and monitoring requirements, frequencies and concentration limits are provided on Table G.2 and Table G.4. Data derived from DMP, CMP and other PLP wells are also used to supplement and aid in the evaluation of the effectiveness of the CAP. Specific elements of the CAP are in Condition VI.G.3.

VI.I. 2. Financial Assurance

In accordance with LAC 33:V.3322, assurance of financial responsibility for corrective action shall be provided by the Permittee in accordance with the applicable requirements of LAC 33:V.Chapter 37.

VI.I.3. Corrective Action Beyond the Facility Property Boundary

Corrective action beyond the facility boundary is required where necessary to protect human health and the environment, unless the Permittee demonstrates to the satisfaction of the Administrative Authority that, despite the Permittee's best efforts, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis. Assurance of financial responsibility for such corrective action must be provided in accordance with LAC 33:V.3322.

VI.J. INSTALLATION/CONSTRUCTION AND ABANDONMENT OF MONITORING WELLS

The construction and abandonment of groundwater monitoring wells must conform to the standards and guidelines specified in latest edition of the "**CONSTRUCTION OF GEOTECHNICAL BOREHOLES AND GROUNDWATER MONITORING SYSTEMS HANDBOOK**" and the Louisiana Department of Transportation and Development's Well Rules, Regulations and Standards.

A work plan for the construction of a new well must be submitted to the Administrative Authority for approval. Upon completion of new or replacement well, a copy of DOTD-GW-1 S, DOTD Well Registration Short Form, is to be provided to the Administrative Authority.

The Permittee must provide for the sealing of any vertical migration path resulting from exploratory boring, leachate collection or detection systems and/or groundwater monitoring programs as provided in LAC 33:V.3323. A work plan for the plugging and abandonment of a well must be submitted for approval by the Administrative Authority, whenever such migration pathways are discovered. Upon completion of well abandonment, a copy of DOTD-GW-2, DOTD Well Plugging and Abandonment Form, is to be provided to the Administrative Authority.

Table G.2
Monitoring Parameters
and Concentration
Limits

Parameter	Concentration Limit ¹ (µg/L)	Reporting Limit (µg/L)
<u>Volatiles</u>		
Chloromethane	10	10
Bromomethane	10	10
Vinyl Chloride	2	2
Chloroethane	10	10
Methylene Chloride**	5	5
Acetone*	100	10
Carbon Disulfide	100	5
1,1-Dichloroethene	7	5
1,1-Dichloroethane	81	5
1,2-Dichloroethane	5	5
Chloroform	100	5
2-Butanone (MEK)**	190	10
1,1,1-Trichloroethane	200	5
Carbon Tetrachloride	5	5
Vinyl Acetate	10*	10
Bromodichloromethane	100	5
1,1,2,2-Tetrachloroethane	0.5	0.5
1,2-Dichloropropane	5	5
trans-1,3-Dichloropropene	5	5
Trichloroethene	5	5
Dibromochloromethane	100	5
1,1,2-Trichloroethane	5	5
Benzene	5	5
cis-1,3-Dichloropropene	5	5
Bromoform	100	5
methyl butyl ketone (2-hexanone)	10*	10
methyl isobutyl ketone	200	10
Tetrachloroethene	5	5
Toluene	1,000	5
Chlorobenzene	100	5
Ethylbenzene	700	5
Styrene	100	5
Total Xylenes	10,000	5
2-Chloronaphthalene	49	10
2-Nitroaniline	50	50
Dimethylphthalate**	37,000	10
Acenaphthylene	100	10

Table G.2
Monitoring Parameters
and Concentration
Limits

Parameter	Concentration Limit ¹ (µg/L)	Reporting Limit (µg/L)
<i>Base/Neutrals, Acids (semi-volatiles)</i>		
3-Nitroaniline	50	50
Acenaphthene	37	10
2,4-Dinitrophenol	50	50
4-Nitrophenol	50	50
Dibenzofuran	10	10
Phenol	180	10
bis(2-Chloroethyl) Ether	5.7	5
2-Chlorophenol	10	10
1,3-Dichlorobenzene	10	10
1,4-Dichlorobenzene	75	10
Benzyl Alcohol	10*	10
1,2-Dichlorobenzene	600	10
2-Methylphenol	10*	10
bis(2-Chloroisopropyl) Ether	5.7	5
4-Methylphenol	10*	10
Nitrosodi-n-propylamine	10	10
Hexachloroethane	10	10
Nitrobenzene	1.9	1
Isophorone	70	10
2-Nitrophenol	10*	10
2,4-Dimethylphenol	73	10
Benzoic Acid	50*	50
bis(2-Chloroethoxy) Methane	10*	10
2,4-Dichlorophenol	11	10
1,2,4-Trichlorobenzene	70	10
Naphthalene	10	10
4-Chloroaniline	20	10
Hexachlorobutadiene	0.73	0.73
4-Chloro-3-methylphenol	10*	10
2-Methylnaphthalene	0.62	0.62
Hexachlorocyclopentadiene	50	10
2,4,6-Trichlorophenol	10	10
2,4,5-Trichlorophenol	370	10
2,4-Dinitrotoluene	10	10
2,6-Dinitrotoluene	10	10
Diethylphthalate**	2,900	10

Table G.2
Monitoring Parameters
and Concentration
Limits

Parameter	Concentration Limit ¹ (µg/L)	Reporting Limit (µg/L)
<u>Base/Neutrals, Acids (semi-volatiles)</u>		
4-Chlorophenyl-Phenyl-Ether	10*	10
Fluorene	24	10
4-Nitroaniline	50	50
4,6-Dinitro-2-methylphenol	50*	50
N-nitrosodiphenylamine	14	10
4-Bromophenyl phenyl ether	10*	10
Hexachlorobenzene	1	1
Pentachlorophenol	1	1
Phenanthrene	180	10
Anthracene	43	10
Di-n-butylphthalate**	10*	10
Fluoranthene	150	10
Pyrene	18	10
Butyl benzyl phthalate**	730	10
3-3'-Dichlorobenzidine	20	20
Benzo(a)anthracene	7.8	5
bis(2-Ethylhexyl) Phthalate**	6	5
Chrysene	1.6	1
Di-n-octylphthalate**	20	10
Benzo(b)fluoranthene	4.8	4
Benzo(k)fluoranthene	2.5	2
Benzo(a)pyrene	0.2	0.2
Indeno(1,2,3-cd)pyrene	3.7	3
Dibenz(a,h)anthracene	2.5	2
Benzo(g,h,i)perylene	10*	10
<u>Conventionals</u>		
Cyanide (mg/L)	0.2	0.005
Chloride (mg/L)		1.0
Sulfate (mg/L)		2.0
<u>Indicator Compounds</u>		
Total Organic Carbon (mg/L)		2.0
pH	Subject to statistical comparison	0.01 unit
Specific conductance	Subject to statistical comparison	1 unit
Turbidity		1 unit

¹ - LDEQ RECAP Table 1 GW Screening Standard unless otherwise noted

* - No LDEQ RECAP Table 1 GW Screening Standard promulgated. Concentration Limit based on background

** - common laboratory analysis artifact

NOTE:

Table G.1 is LAC 33:V.3325 Table 4 Constituents

TABLE G.4
Monitoring Well Network, Monitoring Programs, and Sampling Schedule
CECOS Calcasieu Parish Facility

Well ⁴	Well Note	Zone Monitored	Constituents Sampled ³	
			Second Quarter	Fourth Quarter
MW-50	UIC	Other	VOC, Other ¹	VOC, Other ²
MW-2R	POCDMP	Shallow	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-98	POCDMP	Shallow	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-104	POCDMP	Shallow	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-72	CMP	Shallow	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-74	CMP	Shallow	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-71	CMP	Shallow	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-30	CAP\CMP, Rec.	Shallow	VOC, SVOC	VOC, SVOC
MW-35R	CAP\CMP, Rec.	Shallow	VOC, SVOC	VOC, SVOC
MW-36R	CAP\CMP, Rec.	Shallow	VOC, SVOC	VOC, SVOC
MW-19	POCDMP	50-foot	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-20	POCDMP	50-foot	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-38R	POCDMP	50-Foot	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-45	POCDMP	50-foot	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-51	POCDMP	50-foot	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-58	POCDMP	50-foot	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-68	POCDMP	50-foot	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-69	POC\CMP	50-foot	App. IX	VOC, SVOC, Conv.
MW-70	POCDMP	50-foot	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-23 ⁵	PLP	50-foot	VOC	NS
MW-34 (L-34)	DMP	50-foot	VOC, SVOC, Conv.	NS
MW-40	DMP	50-foot	VOC	NS
MW-42	DMP	50-foot	VOC, SVOC, Conv.	NS
MW-48	DMP	50-foot	VOC	NS
MW-66 ⁵	PLP	50-foot	VOC	NS
MW-60	CMP	50-foot	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-61	CMP	50-foot	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-101	CMP	50-foot	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-15	CMP	50-foot	VOC, SVOC, Conv.	VOC, SVOC, Conv.
RW-2	CMP	50-foot	VOC, SVOC, Conv.	VOC, SVOC, Conv.
RW-3	CMP	50-foot	VOC, SVOC, Conv.	VOC, SVOC, Conv.
RW-4	CMP	50-foot	VOC, SVOC, Conv.	VOC, SVOC, Conv.
RW-12	CMP	50-foot	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-78	CAP\CMP, Rec.	50-foot	VOC, SVOC	VOC, SVOC
MW-27	CAP\CMP, Rec.	50-foot	VOC, SVOC	VOC, SVOC
MW-47	CAP\CMP, Rec.	50-foot	VOC, SVOC	VOC, SVOC
RW-1R	CAP\CMP, Rec.	50-foot	VOC, SVOC	VOC, SVOC
RW-5	CAP\CMP, Rec.	50-foot	VOC, SVOC	VOC, SVOC
RW-7	CAP\CMP, Rec.	50-foot	VOC, SVOC	VOC, SVOC
RW-8	CAP\CMP, Rec.	50-foot	VOC, SVOC	VOC, SVOC
RW-9	CAP\CMP, Rec.	50-foot	VOC, SVOC	VOC, SVOC
RW-10	CAP\CMP, Rec.	50-foot	VOC, SVOC	VOC, SVOC
RW-11	CAP\CMP, Rec.	50-foot	VOC, SVOC	VOC, SVOC
RW-14	CAP\CMP, Rec.	50-foot	VOC, SVOC	VOC, SVOC
RW-15	CAP\CMP, Rec.	50-foot	VOC, SVOC	VOC, SVOC

Table G.3
MW-50 UIC Monitoring Parameters

Semi-Annual Parameters
Priority Pollutant Volatile Organic Compounds - EPA Method 8260, pH, Specific Conductance, Chloride, Total Dissolved Solids, Specific Gravity, Total Organic Carbon, Total Organic Halogens
Annual Parameters
Priority Pollutant Semi-Volatile Organic Compounds Priority Pollutant Pesticides and PCBs Drinking Water Pesticides/Drinking Water Herbicides Metals (Calcium, Magnesium, Potassium, Lead, Arsenic, Selenium, Mercury, Cadmium, Chromium, Silver, Barium, Iron, Sodium) Radium, Gross Alpha, Gross Beta Fluoride, Nitrate (as N), Silica, Phosphate, Appearance Odor, Sulfate Bicarbonate, Carbonate, Coliform Bacteria

TABLE G.4
Monitoring Well Network, Monitoring Programs, and Sampling Schedule
CECOS Calcasieu Parish Facility

Well ⁴	Well Note	Zone Monitored	Constituents Sampled	
			Second Quarter	Fourth Quarter
MW-31	DMP	200-foot (U)	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-54	DMP	200-foot (U)	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-55	DMP	200-foot (U)	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-56	DMP	200-foot (U)	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-57	DMP	200-foot (U)	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-81	DMP	200-foot (U)	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-82	DMP	200-Foot (L)	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-83	DMP	200-Foot (L)	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-84	DMP	200-Foot (L)	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-85	DMP	200-Foot (L)	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-86	DMP	200-Foot (L)	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-87	DMP	200-Foot (L)	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-88	DMP	200-foot (U)	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-89	DMP	200-Foot (L)	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-90	DMP	200-foot (U)	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-91	DMP	200-Foot (L)	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-92	DMP	200-foot (U)	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-93	DMP	200-Foot (L)	VOC, SVOC, Conv.	VOC, SVOC, Conv.
MW-17	DMP	200-Foot (L)	VOC	NS
MW-18	DMP	200-foot (U)	VOC	NS
MW-33	DMP	200-foot (U)	VOC	NS
MW-52R1B	DMP	200-Foot (L)	VOC	NS
MW-52R1T	DMP	200-foot (U)	VOC	NS
MW-102	DMP	200-foot (L)	VOC	NS
MW-103	DMP	200-foot (U)	VOC	NS
MW-53	DMP	200-foot (U)	VOC	NS
WWN	DMP	500-Foot	VOC, SVOC, Conv.	VOC, SVOC, Conv.
P-7	PLP	SPZ	NS	NS
P-8	PLP	SPZ	NS	NS
P-1	PLP	50-foot	NS	NS
P-2	PLP	50-foot	NS	NS
P-2A	PLP	50-foot	NS	NS
P-3	PLP	50-foot	NS	NS
P-3A	PLP	50-foot	NS	NS
P-4	PLP	50-foot	NS	NS
P-4A	PLP	50-foot	NS	NS
P-5	PLP	50-foot	NS	NS
P-6	PLP	50-foot	NS	NS
P-6A	PLP	50-foot	NS	NS
P-10	PLP	50-foot	NS	NS
P-11	PLP	50-foot	NS	NS
P-12	PLP	50-foot	NS	NS
P-13	PLP	50-foot	NS	NS
P-14	PLP	50-foot	NS	NS
P-15	PLP	50-foot	NS	NS

TABLE G.4
Monitoring Well Network, Monitoring Programs, and Sampling Schedule
CECOS Colcasieu Parish Facility

Well ⁴	Well Note	Zone Monitored	Constituents Sampled	
			Second Quarter	Fourth Quarter
P-16	PLP	50-foot	NS	NS
P-17	PLP	50-foot	NS	NS
P-18	PLP	50-foot	NS	NS
P-19C	PLP	50-foot	NS	NS
P-20C	PLP	50-foot	NS	NS
P-21C	PLP	50-foot	NS	NS
PT-1	PLP	50-foot	NS	NS
PT-2	PLP	50-foot	NS	NS
PT-3	PLP	50-foot	NS	NS
PT-4	PLP	50-foot	NS	NS
PT-5	PLP	50-foot	NS	NS
MW-4	PLP	50-foot	NS	NS
MW-80	PLP	50-foot	NS	NS
MW-75	PLP	50-foot	NS	NS
RW-6	PLP	50-foot	NS	NS
RW-13	PLP	50-foot	NS	NS
MW-66	PLP	50-foot	NS	NS
MW-23	PLP	50-foot	NS	NS
MW-46	PLP	50-foot	NS	NS
MW-21	PLP	50-foot	NS	NS
MW-29	PLP	50-foot	NS	NS
MW-25	PLP	50-foot	NS	NS
MW-79	PLP	50-foot	NS	NS
MW-43	PLP	50-foot	NS	NS
MW-44	PLP	50-foot	NS	NS
MW-64	PLP	50-foot	NS	NS
MW-65	PLP	50-foot	NS	NS
MW-77	PLP	50-foot	NS	NS
MW-22	PLP	50-foot	NS	NS
MW-62	PLP	50-foot	NS	NS
MW-28	PLP	200-foot (U)	NS	NS
MW-99	PLP	200-foot (U)	NS	NS
MW-100	PLP	200-foot (L)	NS	NS
P-19A	PLP	Other	NS	NS
P-19B	PLP	Other	NS	NS
P-20A	PLP	Other	NS	NS
P-20B	PLP	Other	NS	NS
P-21A	PLP	Other	NS	NS
P-21B	PLP	Other	NS	NS
MW-8	PLP	Other	NS	NS
MW-5	PLP	Other	NS	NS
MW-10	PLP	Other	NS	NS
MW-11	PLP	Other	NS	NS

TABLE G.4
Monitoring Well Network, Monitoring Programs, and Sampling Schedule
CECOS Calcasieu Parish Facility

- Notes:
- 1 - Parameters listed on GWSAP Table G.3
 - 2 - Parameters listed on GWSAP Table G.3
 - 3 - Field measurements of pH, specific conductivity, temperature recorded for each Sample collected
 - 4 - All wells are part of the Piezometric Levels Program and require quarterly water Level measurements
 - 5 - Sampled Biannually
 - UIC - Underground Injection Control
 - DMP - Detection Monitoring Program
 - CMP - Compliance Monitoring Program
 - CAP - Corrective Action Program
 - PLP - Piezometric Levels Program (Water level only)
 - Conv. - Conventional (See GWSAP Table G.2)
 - Appx. IX - Appendix IX compounds listed in LAC 33:V.3325, Table 4
 - Rec. - Denotes recovery well
 - NS - Not Sampled
 - VOC - Volatile Organic Compounds (also SVOCs) (See GWSAP Table G.2)
 - SVOC - Semi-Volatile Organic Compounds (also SVOCs) (See GWSAP Table G.2)
 - (U) - Screened Upper 200-Foot Zone
 - (L) - Screened Lower 200-Foot Zone

Additional Notes of Reference:

- New Recovery Wells to be Installed:
 - RW-14
 - RW-15
- New Replacement Recovery Well to be Installed:
 - RW-1R
- Re-designation of Existing Wells to the CMP:
 - RW-2
 - RW-3
 - RW-4
 - RW-12
- Re-designation of Existing Wells to the PLP:
 - RW-6
 - RW-13
 - RW-46
- Wells to be Plugged and Abandoned (and are not listed on Table G.4):
 - MW-13
 - MW-24R
 - MW-67
 - MW-73
 - MW-94 through MW-97
 - PCU-245

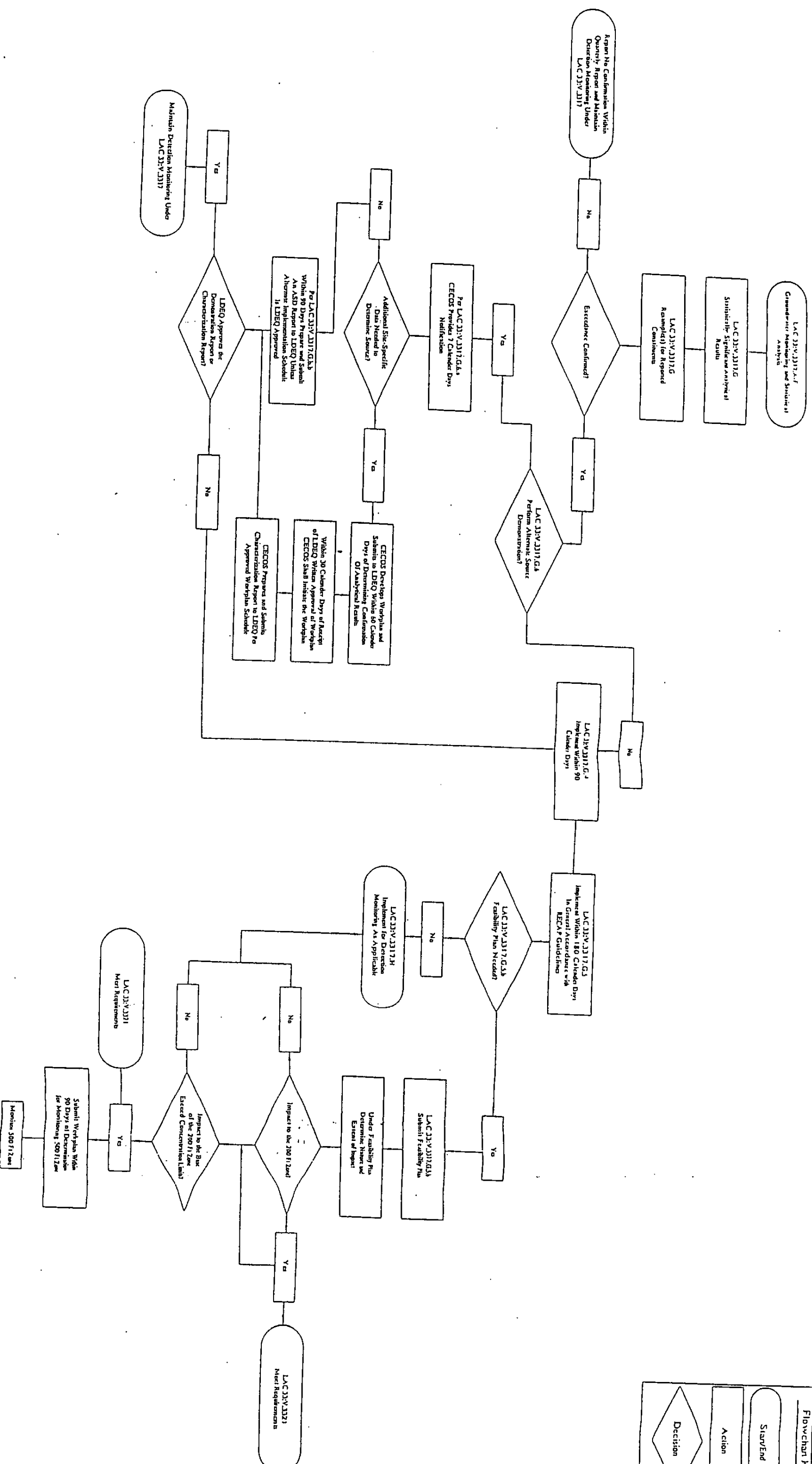
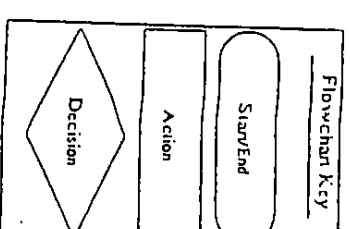


Figure 1

© Allied Waste Industries (2003)

Detection Monitoring
Program

BFI Waste Systems
of North America

4630 South Highway 94
North Outer Road
St. Charles, Missouri 63304
Phone (636) 939-9111
Fax (636) 939-9757
HERST & ASSOCIATES, INC.

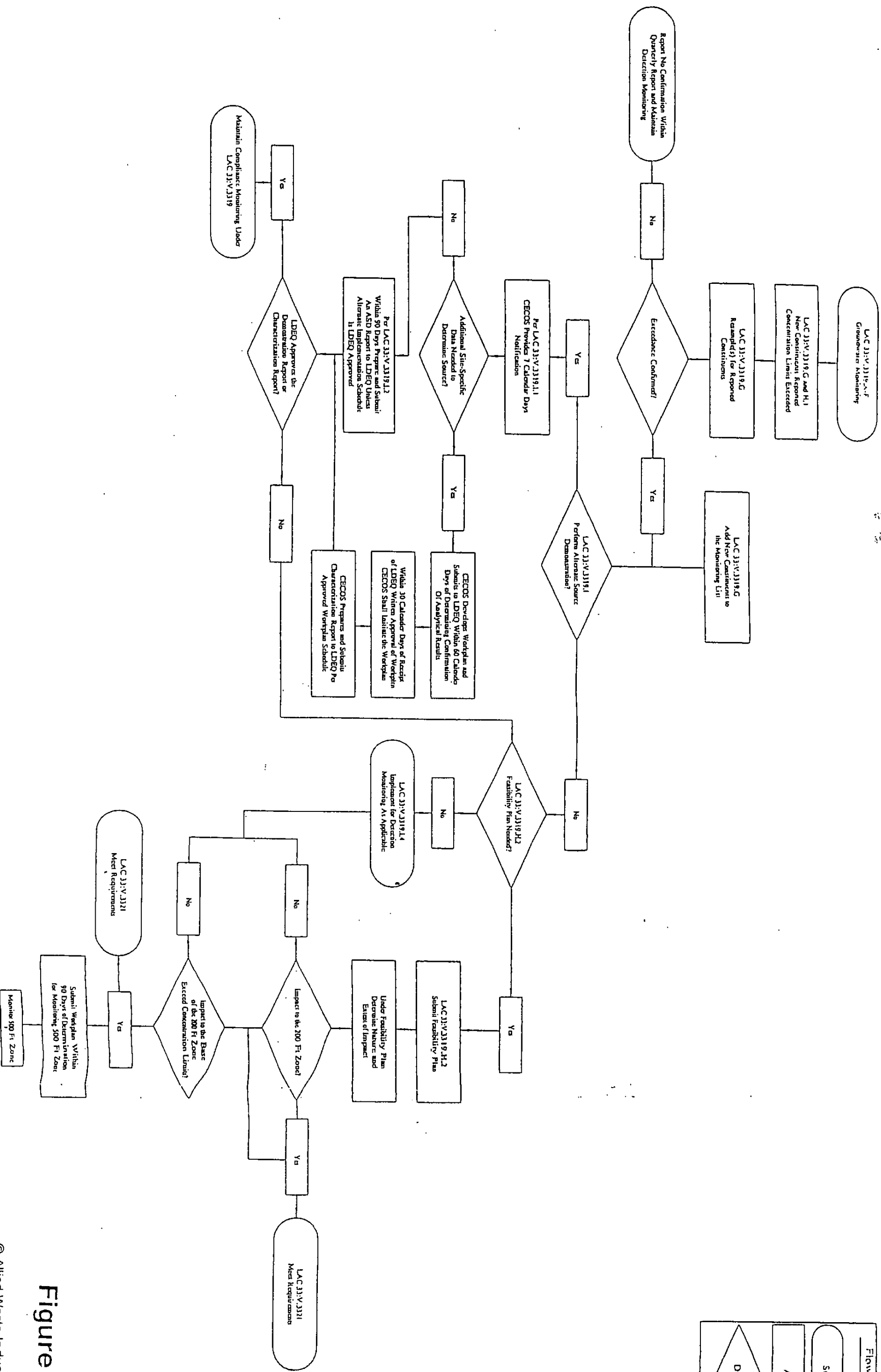
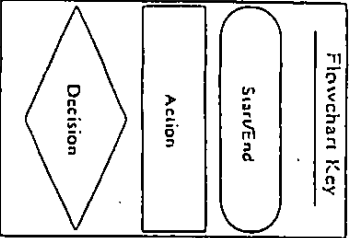


Figure 2

© Allied Waste Industries (2003)

BFI Waste Systems
of North America

Compliance Monitoring
Program

VII. SPECIAL CONDITIONS PURSUANT TO THE 1984 HAZARDOUS AND SOLID WASTE AMENDMENTS TO RCRA FOR CECOS INTERNATIONAL, INC.

VII.A. STANDARD CONDITIONS

VII.A.1. Waste Minimization

Annually, by March 1, for the previous year ending December 31, the Permittee shall enter into the operating record as required by LAC 33:V.1529.B.19, a statement certified according to LAC 33:V.513.A specifying that the Permittee has a program in place to reduce the volume and toxicity of hazardous wastes generated by the facility's operation to the degree determined by the Permittee to be economically practicable; and the proposed method of treatment, storage, or disposal is that practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment. A current description of the program shall be maintained in the operating record and a copy of the annual certified statement shall be submitted to the Administrative Authority. The following are suggested criteria for the program:

- VII.A.1.a.** Any written policy or statement that outlines goals, objectives, and/or methods for source reduction and recycling of hazardous waste at the facility;
- VII.A.1.b.** Any employee training or incentive programs designed to identify and implement source reduction and recycling opportunities;
- VII.A.1.c.** An itemized list of the dollar amounts of capital expenditures (plant and equipment) and operating costs devoted to source reduction and recycling of hazardous waste;
- VII.A.1.d.** Factors that have prevented implementation of source reduction and/or recycling;
- VII.A.1.e.** Sources of information on source reduction and/or recycling received at the facility (e.g., local government, trade associations, suppliers, etc.);
- VII.A.1.f.** An investigation of additional waste minimization efforts which could be implemented at the facility. This investigation would analyze the potential for reducing the quantity and toxicity of each waste stream through production reformulation, recycling, and all other appropriate means. The analysis would include an assessment of the technical feasibility, cost, and potential waste reduction for each option;

- VII.A.1.g. A flow chart or matrix detailing all hazardous wastes it produces by quantity, type, and building/area;
- VII.A.1.h. A demonstration of the need to use those processes which produce a particular hazardous waste due to a lack of alternative processes or available technology that would produce less hazardous waste.
- VII.A.1.i. A description of the waste minimization methodology employed for each related process at the facility. The description should show whether source reduction or recycling is being employed.
- VII.A.1.j. A description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years.

VII.A.2. Dust Suppression

Pursuant to LAC 33:V.4139.B.4, and the Toxic Substances Control Act, the Permittee shall not use waste or used oil or any other material which is contaminated with dioxin, polychlorinated biphenyls (PCBs), or any other hazardous waste (other than a waste identified solely on the basis of ignitability), for dust suppression or road treatment.

VII.A.3. Permit Modification

The Permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts at any time, may be cause for termination or modification of this permit in accordance with LAC 33:323.B.2 and 3.

If at any time the Administrative Authority determines that modification of this permit is necessary, the Administrative Authority may initiate a modification or may require the Permittee to request a permit modification in accordance with the applicable requirements of LAC 33:V.Chapter 3 and the applicable public notice requirements in LAC 33:V.Chapter 7. The Permittee may initiate a permit modification in accordance with the applicable requirements of LAC 33:V.Chapter 3 and the applicable public notice requirements in LAC 33:V.Chapter 7.

VII.A.4. Suspension, Modification, or Revocation and Reissuance, and Termination of Permit

This permit may be modified, revoked and reissued, or terminated for cause as specified in LAC 33:V.323. The filing of a request by the ptee for a permit modification, revocation and reissuance, termination, or the notification of planned changes or anticipated noncompliance on the part

of the Permittee, does not stay the applicability or enforceability of any permit condition.

VII.A.4.a. If the Administrative Authority tentatively decides to modify or revoke and reissue a permit under LAC 33:V.321.C.3 or 323, a draft permit shall be prepared incorporating the proposed changes. The Administrative Authority may request additional information and, in the case of a modified permit, may require the submission of an updated permit application.

VII.A.4.b. The Permittee may initiate permit modification proceedings under LAC 33:V.321.C. All applicable requirements and procedures as specified in LAC 33:V.321.C shall be followed.

VII.A.4.c. Modifications of this permit do not constitute a reissuance of the permit.

VII.A.5. Permit Review

This permit may be reviewed by the Administrative Authority five (5) years after the date of permit issuance and may be modified as necessary as provided for in Condition VII.A.3. Nothing in this condition shall preclude the Administrative Authority from reviewing and modifying the permit at any time during its term.

VII.A.6. Compliance with Permit

Compliance with a RCRA permit during its term constitutes compliance, for purposes of enforcement, with subtitle C of RCRA except for those requirements not included in the permit which:

VII.A.6.a. Become effective by statute;

VII.A.6.b. Are promulgated under LAC 33:V.Chapter 22 restricting the placement of hazardous wastes in or on the land; or

VII.A.6.c. Are promulgated under LAC 33:V.Chapters 23, 25 and 29 regarding leak detection systems for new and replacement surface impoundment, waste pile, and landfill units, and lateral expansions of surface impoundment, waste pile, and landfill units. The leak detection system requirements include double liners, **CQA programs**, monitoring action leakage rates, and response action plans, and will be implemented through the procedures of LAC 33:V.321.C Class 1 permit modifications.

VII.A.7. Specific Waste Ban

- VII.A.7.a.** The Permittee shall not place in any land disposal unit the wastes specified in LAC 33:V.Chapter 22 after the effective date of the prohibition unless the Administrative Authority has established disposal or treatment standards for the hazardous waste and the Permittee meets such standards and other applicable conditions of this permit.
- VII.A.7.b.** The Permittee may store wastes restricted under LAC 33:V.Chapter 22 solely for the purpose of accumulating quantities necessary to facilitate proper recovery, treatment, or disposal provided that it meets the requirements of LAC 33:V.2239.A.2 including, but not limited to, clearly marking each tank or container.
- VII.A.7.c.** The Permittee is required to comply with all applicable requirements of LAC 33:V.2245 as amended. Changes to the waste analysis plan will be considered permit modifications at the request of the Permittee, pursuant to LAC 33:V.321.C.
- VII.A.7.d.** The Permittee shall perform a waste analysis at least annually or when a process changes, to determine whether the waste meets applicable treatment standards. Results shall be maintained in the operating record.
- VII.A.7.e.** The Permittee must comply with requirements restricting placement of hazardous wastes in or on land which become effective by statute or promulgated under LAC 33:V.Chapter 22, regardless of requirements in the permit. Failure to comply with the regulations may subject the Permittee to enforcement action under Section 3008 of RCRA and the Louisiana Environmental Quality Act, La. R.S. 30:2001 et.seq.

VII.A.8. Information Submittal

Failure to comply with any condition of the permit, including information submittal, constitutes a violation of the permit and is grounds for enforcement action, permit amendment, termination, revocation, suspension, or denial of permit renewal application. Falsification of any submitted information is grounds for termination of this permit (LAC 33:V.323.B.3).

The Permittee shall ensure that all plans, reports, notifications, and other submissions to the Administrative Authority, required in this permit, are signed and certified in accordance with LAC 33:V.Chapter 5, Subchapter

B. Five (5) copies each of these plans, reports, notifications or other submissions and one (1) electronic copy (3.5" IBM compatible disk or CD) of all portions thereof which are in word processing format shall be submitted to the Administrative Authority by Certified Mail or hand delivered to:

Louisiana Department of Environmental Quality
Office of Environmental Services
602 N. Fifth Street
Baton Rouge, LA 70802

VII.A.9. Plans and Schedules Incorporation Into Permit

The Permittee must submit all plans, time schedules, work plans (drafts/preliminary and finals) and reports (drafts and finals), required by this permit, to the Administrative Authority for approval and, upon approval by the Administrative Authority, incorporated into this permit by reference and become an enforceable part of this permit. Since required items are essential elements of this permit, failure to submit any of the required items or submission of inadequate or insufficient information may subject the Permittee to enforcement action under Section 3008 of RCRA which may include fines, suspension, or revocation of the permit.

Any noncompliance with approved plans and schedules shall be termed noncompliance with this permit. Written requests for extensions of due dates for submittals may be granted by the Administrative Authority.

If the Administrative Authority determines that actions beyond those provided for, or changes to what is stated herein, are warranted, the Administrative Authority may modify this permit according to procedures in Condition VII.A.3.

VII.A.10. Data Retention

All raw data, such as laboratory reports, drilling logs, bench-scale or pilot-scale data, and other supporting information gathered or generated during activities undertaken pursuant to this permit shall be maintained at the facility during the term of this permit, including any reissued permits.

All wastes which are managed pursuant to a remedial measure taken under the corrective action process or as an interim measure addressing a release or the threat of a release from a solid waste management unit shall be managed in a manner protective of human health and the environment and in compliance with all applicable Federal, State and local requirements. Until such time as final regulations are adopted, proposed regulations under Subpart S - Corrective Action for Solid Waste Management Units -

40 CFR 264.550, 264.551 and 264.552, Federal Register, Friday, July 27, 1990, pp 30798-30884, or updated versions thereof acceptable to the Administrative Authority, shall be applicable as guidance for managing these wastes. Approval of units for managing wastes and conditions for operating the units, if approved, shall be granted through the permitting process.

VII.A.11. Solid Waste Management Units

The Permittee shall, within fifteen (15) calendar days, notify the Administrative Authority of any release of hazardous waste or hazardous constituents that may have occurred from any Solid Waste Management Unit (SWMU), surface impoundment and/or landfill cells, at the facility, regardless of when the release occurred or may have occurred, and regardless of when the waste was placed in the unit. Releases occurring from any SWMU will be addressed in accordance with Condition VI.I. under corrective action. The Permittee shall perform any and all other actions deemed necessary by the Administrative Authority to address such releases in a timely manner. Also, if the Permittee becomes aware of any SWMU not addressed in the RCRA Facility Assessment, the Permittee must:

- VII.A.11.a.** immediately (24 hours) notify the Administrative Authority, and
- VII.A.11.b.** within forty-five (45) days of becoming aware of a solid waste management unit, submit a preliminary assessment of information regarding the SWMU to determine if there has been or is currently a release from the unit. The Permittee shall contact the Administrative Authority for guidance regarding the required information to be submitted. Based upon this information, the Administrative Authority may modify this permit as necessary.

VII.A.12. Definitions

- VII.A.12.a.** Release - any spilling, leaking, pumping, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment.
- VII.A.12.b.** Solid waste management unit (SWMU) - "any discernible solid waste unit at a RCRA facility from which hazardous wastes or constituents might migrate, irrespective of whether the unit was intended for the management of solid and/or hazardous waste" (50 FR 28702 July 15, 1985). The SWMU definition includes container storage units; tanks; surface impoundments; waste piles; land treatment units; landfills; incinerators; underground injection wells; physical, chemical, and biological treatment units; and areas

contaminated by routine and systematic discharges from process areas.

VII.B. SPECIFIC CONDITIONS - INFORMATION REPOSITORY

VII.B.1. Within thirty (30) days of the effective date of this permit, the Permittee shall establish an information repository to provide the public an opportunity to review and comment on final submittals concerning corrective action activities specified in this permit. This repository shall be established at a local public library or similar facility that is easily accessible to the public. This permit condition shall be incorporated into the requirements specified in Condition VII.H.2.G., (Community Relations Plan).

VII.B.2. Within thirty (30) days of the effective date of this permit, the Permittee shall mail a notice to all individuals on the facility-specific mailing list maintained by the Office of Environmental Services, Environmental Assistance Division, Public Participation Group, P.O. Box 4313, Baton Rouge, Louisiana 70821-4313. The Permittee shall amend this mailing list as necessary to include those individuals that submit a written request to the Administrative Authority and the Permittee for inclusion in this list.

VII.B.3. This notice shall state the location, purpose, and content of this repository. A copy of this notice shall be provided to the Administrative Authority by facsimile or certified mail, prior to mailing to the public.

VII.B.4. The Permittee shall state in this notice that written comments concerning each final submittal regarding corrective action activities required by this permit shall be forwarded to the following representatives of the Regulatory Agencies within fifteen (15) calendar days of the date due to the Administrative Authority:

Office of Environmental Services
Permits Support Services Division
P.O. Box 4313
Baton Rouge, Louisiana 70821-4313
Telephone No. (225) 219-3276
Soumaya.Ghosn@la.gov

VII.B.5. Once established, the Permittee shall send all documents, reports, data, (e.g., final work plans, final reports, permit modifications, and all addendums to these documents [e.g., Notice of Deficiencies]) concerning corrective action activities as specified in this permit to the information repository concurrently with delivery to the Administrative Authority. The Permittee shall specify within the text or cover letter of each document the date each submittal was sent to the repository.

- VII.B.6.** Within five (5) calendars after the due date of each final submittal concerning corrective action activities required by this permit, the Permittee shall mail a notice to each individual on the facility-specific mailing list specified in Condition VII.B.2., indicating the date the respective submittal was submitted to the Administrative Authority and the date the submittal was sent to the repository.

VII.C. SPECIFIC CONDITIONS - SURFACE IMPOUNDMENTS, LANDFILLS, AND AREA OF CONTAMINATION

- VII.C.1.** The Permittee must maintain all closed surface impoundments 2-9 (also referred to in the past as lagoons, ponds and basins) and landfill cells 1-6, Pond 10 and the Northeast Corner, currently established under corrective action in order to ensure source control to the maximum extent possible. The Administrative Authority may further assess the need for corrective action as deemed necessary. The Permittee must:

- VII.C.1.a.** maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events.
- VII.C.1.b.** remove and treat groundwater, in the event that a Corrective Action Plan is necessary. The removal and treatment of the groundwater will be conducted in accordance with an Administrative Authority approved Corrective Action Plan.
- VII.C.1.c.** maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of LAC 33:V.Chapter 33 and maintain and monitor the leachate collection systems and leak detection system as discussed in Condition VI.C.4.
- VII.C.1.d.** manage a run-on and run-off control system to prevent erosion and other damage to the final cover;
- VII.C.1.e.** protect and maintain surveyed benchmarks used in complying with LAC 33:V.Chapter 33.
- VII.C.1.f.** for all permitted units, maintain the cover with a final cover designed, constructed and maintained to:
 - VII.C.1.f.i.** provide long-term minimization of migration of liquids through the surface impoundments,
 - VII.C.1.f.ii.** function with minimal maintenance at all units,

- VII.C.1.f.iii. promote drainage and minimize erosion or abrasion of the final cover at all units,
- VII.C.1.f.iv. accommodate settling and subsidence, as necessary, so that the cover's integrity is maintained for all units, and
- VII.C.1.f.v. have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present at the surface impoundments.

VII.D. CORRECTIVE ACTION

The Corrective Action was established in accordance with LAC 33:V.3321 and 3322 to ensure that all units are in compliance with the groundwater protection standard under LAC 33:V.3305. Corrective action consists of a network of recovery wells and related piezometers. Presently, there are no 200-Foot Zone corrective action wells. Corrective action wells and monitoring requirements, frequencies and concentration limits are provided on Table G.2 and G.4 in Condition VI. of this permit.

VII.D.1. Initiation of Corrective Action

Corrective Action has been initiated and is currently ongoing at the facility in accordance with the approved Groundwater Sampling and Analysis Plan (GWSAP).

VII.D.2. Operations and Maintenance of Corrective Action

The Permittee shall maintain and operate a groundwater recovery system which includes recovery wells MW-27, MW-30, MW-35R, MW-36R, RW-47, MW-78, RW-1R, RW-5, RW-7, RW-8, RW-9, RW-10, RW-11, RW-14, and RW-15. The recovery system must be operational at least 70-percent of the time on a monthly basis. The Permittee shall document compliance in the semi-annual Groundwater Monitoring Reports. Any well that is non-operational for greater than 30-percent on a monthly basis will be specifically addressed in the Groundwater Monitoring Reports. This information shall include, but not be limited to, the operational status of each well on a daily basis, dates of malfunction, and the actions taken to repair the problem.

The Permittee shall conduct annual well efficiency tests on those recovery wells in use to demonstrate that sufficient concentrations of contaminants are being recovered from each well. The methodology and results of this testing shall be submitted to the Administrative Authority in the annual groundwater reports. This report shall include the evaluation of the effectiveness of the groundwater recovery system.

Treatment and/or disposal of recovered waters under compliance with this provision shall in no manner relieve the Permittee's obligation to comply with any Federal, State or local laws, regulations, or ordinances.

VII.D.2.a. Surface Water Drainage Controls

The Permittee shall maintain facility ditches to facilitate movement of water along the ditches to the outfalls and to prevent pooling and ponding in the ditches. If the current design of the ditches is such that pooling or ponding is inevitable, the ditches either shall be redesigned and constructed, (e.g., adding sumps and/or concrete lining the ditches), or shall be operated to eliminate pooling or ponding of water.

VII.D.2.b. Cap Maintenance

The Permittee shall inspect, repair, maintain and revegetate, as appropriate, all covers and caps on all closed units on a timely basis.

VII.D.2.c. Leachate Collection Systems and Leak Detection System

The leachate collection systems and leak detection system must be inspected in accordance with the approved inspection plan. These systems are required to be inspected for the presence of leachate or fluids on a quarterly basis. The leachate collection systems and leak detection system will be analyzed in accordance with the requirements of Condition VI.C.4.

The Permittee shall maintain the efficiency and integrity of the leachate collection system constructed at the facility. Semi-Annual Leachate Reports shall be submitted to the Administrative Authority. These reports shall include recovered leachate volumes for the six (6) month period, leachate analytical data, field logs and copies of sample chain of custodies from the first semi-annual sampling event. Volumes of water covered from the recovery wells system for the six (6) month period and graphs of recovered water volumes for the past three (3) years should be included. A separate notification and report should be submitted to the Administrative Authority if any leachate releases into the leak detection system is observed.

VII.D.2.e. 100-Year Floodplain Protection

The Permittee has addressed issues concerning the 100-year floodplain at the site. In 1996, the ground surface elevation of the

Northeast Corner of the site was raised by filling the area to elevations above the 100-year flood plain. The Purpose of the construction is to protect the facility from potential flooding from the Little River due to a 100-year flood. All work was in adherence to the Northeast Corner Flood Protection workplan dated August 23, 1994. The Construction Certification Report, Northeast Corner Flood Protection dated May 5, 1997 documents all work performed within this area.

VII.D.3. Measures for Discovered Releases

- VII.D.3.a.** If during the course of any activity initiated under this permit, the Administrative Authority determines that a confirmed release of hazardous wastes or hazardous waste constituents from a SWMU poses a threat to human health or the environment, the Administrative Authority will require corrective measures. The Administrative Authority shall determine the specific corrective measure(s) or require the Permittee to propose a measure(s). The corrective measure(s) may include a permit modification, a schedule for implementation, and a written plan. The Administrative Authority shall modify this permit to incorporate the corrective measures into the permit.
- VII.D.3.b.** The following factors will be considered by the Administrative Authority in determining the need for corrective measures:
- VII.D.3.b.i.** Time required to develop and implement a final remedy;
 - VII.D.3.b.ii.** Actual and potential exposure to human and environmental receptors;
 - VII.D.3.b.iii.** Actual and potential contamination of drinking water supplies and sensitive ecosystems;
 - VII.D.3.b.iv.** The potential for further degradation of the medium in the absence of corrective measures;
 - VII.D.3.b.v.** Presence and concentration of hazardous waste including hazardous constituents in soil that has the potential to migrate to groundwater or surface water;
 - VII.D.3.b.vi.** Other situations, as determined by the Administrative Authority, that may pose threats to human health and the environment.

VII.E. CORRECTIVE ACTION FOR CONTINUING RELEASES TO THE 200 FOOT AND 500 FOOT ZONES

VII.E.1. The Permittee, upon determining an exceedance at any monitoring well in the 200-Foot Zone, may submit an ASD in accordance with LAC 33:V.3319.I and Conditions VI.G.2.a.xiii. and VI.G.2.a.xiv. of this permit.

VII.E.2. If the ASD is not approved, then the Permittee must submit an Engineering Feasibility Plan for corrective action and a permit modification in accordance with LAC 33:V.3319.H.2 and Condition VII.G.1.a.xii. and VI.G.2.a.xiv. of this permit.

VII.F. ADDITIONAL GROUNDWATER MONITORING AND ASSESSMENT REQUIREMENTS

The Permittee will optimize the groundwater recovery system in accordance with the approved "Workplan for Proposed Recovery and Monitoring Well Installation and Abandonment Activities CECOS International, Inc., Calcasieu Parish, Louisiana." These activities include but are not limited to the following:

- New Recovery Wells to be Installed:
 - RW-14
 - RW-15
- New Replacement Recovery Well to be Installed:
 - RW-1R
- Re-designation of Existing Wells to the CMP:
 - RW-2
 - RW-3
 - RW-4
 - RW-12
- Re-designation of Existing Wells to the PLP:
 - RW-6
 - RW-13
 - RW-46
- Wells to be Plugged and Abandoned (and are not listed on Table G.4):
 - MW-13
 - MW-24R
 - MW-67
 - MW-73
 - MW-94 through MW-97
 - PCU-245

The Permittee may be required to perform additional groundwater monitoring, assessment and improvements to the recovery system as a result of any future plans and/or submittals (i.e., Engineering Feasibility Plan, work plans, etc.).

VII.G. CORRECTIVE MEASURES (REMEDY) SELECTION AND IMPLEMENTATION

The Permittee operates a network of active recovery wells at the facility to address groundwater remediation. The purpose of the groundwater recovery system is to alter groundwater flow gradients to create capture zones of confirmed impacts and to prevent off-site migration and vertical migration of contaminants.

There are two zones that have been impacted with contamination, the 50-Foot Zone and the Shallow Pervious Zone (SPZ). The SPZ is located in the Northeast corner of the facility.

The Permittee will continue to operate and monitor the groundwater remediation system within the 50-Foot and Shallow Pervious Zones to prevent off site migration and vertical migration of contaminants to the 200 and 500-Foot Zones. Remediation will continue until groundwater drinking standards are achieved.

The Permittee will continue to capture the contaminated groundwater from the two impacted zones and dispose of the recovered groundwater in the deep-water injection well on-site.

VII.H. SCOPE OF WORK FOR AN ENGINEERING FEASIBILITY PLAN

VII.H.1. Purpose

The purpose of the Engineering Feasibility Plan, in accordance with LAC 33:V.3317.G.5 and 3319.H.2 and Conditions VI.G.1.a.xii. and VI.G.2.a.xiv. of this permit, is to verify and determine the nature and extent of releases of hazardous waste or constituents from regulated units, solid waste management units, and other source areas at the facility and to gather all necessary data to support whether the facility will be required to meet the requirements of LAC 33:V.3319.I.3 and 4 or LAC 33:V.3321. The Permittee shall furnish all personnel, materials, and services necessary for, or incidental to, performing the Engineering Feasibility Plan at facility. All responses must be clearly labeled as to which part of the Engineering Feasibility Plan they pertain.

VII.H.2. Scope

The Engineering Feasibility Plan consists of but is not limited to the following:

- A. Nature and Extent of Contamination
- B. Contamination Characterization
- C. Potential Receptor Identification
- D. Data Collection Quality Assurance Plan
- E. Data Management Plan
- F. Health and Safety Plan
- G. Community Relations Plan
- H. Project Management Plan
- I. Corrective Action Plan

VII.H.2.A. Nature and Extent of Contamination

The introduction shall summarize all possible source areas of contamination. The Permittee shall prepare an assessment and description of the existing degree and extent of contamination. This should include:

- VII.H.2.A.1.** available monitoring data and qualitative information on locations and levels of contamination at the facility;
- VII.H.2.A.2.** all potential migration pathways including information on geology, pedology, hydrogeology, physiography, hydrology, water quality, meteorology, and air quality; and
- VII.H.2.A.3.** the potential impact(s) on human health or the environment, including demography, groundwater and surface water use, and land use.

VII.H.2.B. Contamination Characterization

The Permittee shall describe in detail a program to collect analytical data on groundwater and soils contamination when necessary to characterize contamination from a SWMU. The data shall be sufficient to define the extent, origin, direction, and rate of movement of contaminant plumes. Data required shall include time and location of sampling, media sampled, concentrations found, conditions during sampling, and the identity of the individual(s) performing the sampling and analysis. The ground water and soils, unless otherwise specified must be investigated. If the Permittee believes certain media could not be affected by a release from a specific unit, a detailed justification for not investigating those media must be provided. The Permittee shall address the following types of contamination at the facility as appropriate:

VII.H.2.B.1. Groundwater Contamination

The work plan shall describe in detail a program of ground water investigation to characterize any groundwater plumes of contamination at the facility that are not subject to corrective action requirements of LAC 33:V.3321 and 3322. The program shall at a minimum provide for the following information needs:

- VII.H.2.B.1.a.** a description of the horizontal and vertical extent of any immiscible or dissolved plume(s) originating from the facility;
- VII.H.2.B.1.b.** the horizontal and vertical direction of contamination movement;
- VII.H.2.B.1.c.** the velocity of contaminant movement;
- VII.H.2.B.1.d.** the horizontal and vertical concentrations of any LAC 33:V.3325. Table 4 constituents;
- VII.H.2.B.1.e.** an evaluation of factors influencing the plume movement; and
- VII.H.2.B.1.f.** an extrapolation of future contaminant movement.

VII.H.2.B.2. Soil Contamination

The Permittee shall describe in detail a program to characterize contamination of soil in the vicinity of the contaminant release. The program shall provide for the following information needs:

- VII.H.2.B.2.a.** a description of the vertical and horizontal extent of contamination;
- VII.H.2.B.2.b.** a description of contaminant and soil chemical properties within the contaminant source area. This includes contaminant solubility, speciation, adsorption, leachability, exchange capacity, biodegradability, hydrolysis, photolysis, oxidation, natural total organic carbon content, and other factors that might affect contaminant migration and transformation; and

- VII.H.2.B.2.c. plume migration and transformation; specific contaminant concentrations; the velocity and direction of contaminant movement; and an extrapolation to future contaminant movement.

VII.H.2.C. Potential Receptors Identification

The Permittee shall describe in detail a program to collect data to describe human populations and environmental systems that are susceptible to contaminant exposure from the facility. Data on observable effects in ecosystems may also be required. The following characteristics shall be identified:

VII.H.2.C.1. Local uses and possible future uses of groundwater, including:

- VII.H.2.C.1.a. type of use (i.e., potable, domestic, agricultural, residential, industrial, municipal).
- VII.H.2.C.1.b. location of all groundwater wells, names of owners or tenants at those locations, USGS/DODT well designations, and current use of those wells within a 1 mile radius of facility.
- VII.H.2.C.1.c. Local uses and possible future uses of surface waters within a 1.5 mile radius of the facility, including domestic and municipal, recreational, agricultural, industrial, and environmental.
- VII.H.2.C.1.d. Human use of or access to the facility and adjacent lands, including but not limited to recreation, hunting, residential, commercial, and industrial.
- VII.H.2.C.1.e. A demographic profile of people who use or have access to the facility and adjacent land, including, but not limited to age, gender, and sensitive subgroups.

VII.H.2.D. Data Collection Quality Assurance Plan

The Permittee shall prepare a plan to document all monitoring procedures: sampling, field measurements, and sample analysis performed at the facility during the investigation to characterize the environmental setting, source, and contamination, so as to ensure that all information, data, and resulting decisions are technically sound, statistically valid, and properly documented.

VII.H.2.D.1. The strategy section of the Data Collection Quality Assurance Plan shall include but not be limited to the following:

VII.H.2.D.1.a. description of the intended uses for the data, and the necessary level of precision and accuracy for those intended uses;

VII.H.2.D.1.b. description of methods and procedures to be used to assess the precision, accuracy and completeness of the measurement data; and

VII.H.2.D.1.c. schedule and information to be provided in quality assurance reports, including at least:

VII.H.2.D.1.c.(i). periodic assessment of measurement data accuracy, precision, and completeness;

VII.H.2.D.1.c.(ii). results of performance audits;

VII.H.2.D.1.c.(iii). results of systems audits; and

VII.H.2.D.1.c.(iv). significant quality assurance problems and resolutions.

VII.H.2.D.2. The Sampling and Field Measurements Section of the Data Collection Quality Assurance Plan shall at least discuss:

VII.H.2.D.2.a. selecting appropriate sampling and field measurements locations, depths, etc.;

VII.H.2.D.2.b. providing a statistically sufficient number of sampling and field measurement sites;

VII.H.2.D.2.c. determining conditions under which sampling or field measurements shall be conducted;

VII.H.2.D.2.d. determining which parameters are to be measured and where;

VII.H.2.D.2.c. selecting the frequency of sampling and length of sampling period;

- VII.H.2.D.2.d. selecting the types of sample (e.g., composites vs. grabs) and number of samples to be collected;
- VII.H.2.D.2.e. delineating procedures designed to prevent contamination of sampling or field measurements equipment and cross contamination between sampling points;
- VII.H.2.D.2.f. documenting field sampling operations and procedures;
- VII.H.2.D.2.g. selecting appropriate sample containers;
- VII.H.2.D.2.h. preserving samples;
- VII.H.2.D.2.i. controlling chain-of-custody; and
- VII.H.2.D.2.j. disposing of all contaminated materials generated by activities in a manner compliant with all state and Federal regulations.

VII.H.2.D.3. The Sample Analysis shall include:

- VII.H.2.D.3.a. chain-of-custody procedures;
- VII.H.2.D.3.b. sample storage procedures and holding times;
- VII.H.2.D.3.c. sample preparation methods;
- VII.H.2.D.3.d. analytical procedures;
- VII.H.2.D.3.e. calibration procedures and frequency;
- VII.H.2.D.3.f. data reduction, validation and reporting; and
- VII.H.2.D.3.h. frequency of internal quality control checks and laboratory performance audits.

VII.H.2.E. Data Management Plan

- VII.H.2.E.1. The Permittee shall develop and initiate a Data Management Plan to document and track investigation data and results. This plan shall identify and set up data documentation materials and procedures (data record), project file requirements, and project-related progress reporting procedures and documents.

VII.H.2.E.1.a. The data record shall include at least the following for all sample and field measurements: unique measurement code; measurement location; measurement type; laboratory ID number; property or component analyzed; and results of analysis.

VII.H.2.E.1.b. The Data Management Plan shall provide the format to be used to present the data and conclusions of the investigation, etc.

VII.H.2.E.1.b.i. The following shall be presented in tables: raw data; data sorted by significant features such as location, media, constituent; data reduction for statistical analysis; and summary data.

VII.H.2.E.1.b.ii. The following shall be presented in graphical formats (e.g., bar graphs, line graphs, plan maps, isopleth plots, cross-sections, three-dimensional displays, etc.): sampling location and grid; levels of contamination at each sampling location; geographical extent of contamination; and changes in concentration relative to source, time, depth, and other parameters.

VII.H.2.F. Health and Safety Plan

VII.H.2.F.1 The Permittee shall prepare a facility Health and Safety Plan, which shall include:

VII.H.2.F.1.a. a description of the facility including availability of resources such as roads, water supply, electricity and telephone service;

VII.H.2.F.1.b. a description of the known hazards and evaluation of the risks associated with each activity conducted, including but not limited to on and off-site exposure to contaminants during implementation of interim measures;

VII.H.2.F.1.c. a list of key personnel and alternatives responsible for site safety, response operations, and for protection of public health;

- VII.H.2.F.1.d. a delineation of the work area;
- VII.H.2.F.1.e. a description of levels of protection to be worn by personnel in the work area;
- VII.H.2.F.1.f. procedures established to control site access;
- VII.H.2.F.1.g. decontamination procedures for personnel and equipment;
- VII.H.2.F.1.h. site emergency procedures;
- VII.H.2.F.1.i. emergency medical care procedures for injuries and toxicological problems;
- VII.H.2.F.1.j. requirements for an environmental field monitoring program;
- VII.H.2.F.1.k. routine and special training requirements for responders; and
- VII.H.2.F.1.l. procedures for protecting workers from weather-related problems.
- VII.H.2.F.2. The Facility Health and Safety Plan shall be consistent with:
 - VII.H.2.F.2.a. NIOSH Occupation Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);
 - VII.H.2.F.2.b. EPA Order 1440.1 - Respiratory Protection;
 - VII.H.2.F.2.c. EPA Order 1440.3 - Health and Safety Requirements for Employees engaged in Field Activities;
 - VII.H.2.F.2.d. approved Facility Contingency Plan;
 - VII.H.2.F.2.e. EPA Operating Safety Guide (1984);
 - VII.H.2.F.2.g. OSHA regulations, particularly 29 CFR 1910 and 1926;
 - VII.H.2.F.2.h. State and local regulations; and
 - VII.H.2.F.2.i. other EPA guidance as provided.

VII.H.2.G. Community Relations Plan

The Permittee shall prepare a plan for dissemination of information to the public regarding investigation activities and results.

VII.H.2.H. Project Management Plan

The Permittee shall prepare a Project Management Plan which will include a discussion of the technical approach, schedules, budget, and key project personnel. The project management plan will also include a description of qualifications of key project personnel performing or directing the Engineering Feasibility Plan, including contractor personnel. This plan shall also document the overall management approach to the Engineering Feasibility Plan.

VII.H.2.I. Corrective Action Plan

If the Permittee has determined there is an impact to the 200-Foot Zone, a corrective action plan must be submitted to address the impact, in accordance with LAC 33:V.3321 and 3322.

TABLE 1: Facility Submission Summary

A summary of the information reporting requirements and work contained in the Engineering Feasibility Plan is presented below:

Facility Submission	Due Date
Engineering Feasibility Plan for the Detection Monitoring Program	Within 180 days of the confirmed exceedance of the approved concentration limits in Table G.2
Engineering Feasibility Plan (if not previously submitted) for the Compliance Monitoring Program	Within 90 days of the confirmed exceedance of the approved concentration limits in Table G.2
Submission of Notice of Intent to Proceed with any field activities, etc. associated with the Engineering Feasibility Plan	According to schedule in Engineering Feasibility Plan
Characterization Report	According to schedule in Engineering Feasibility Plan
Engineering Feasibility Plan for the 500 Foot	Within 90 days from the determination of impacts exceeding concentration limits at base of 200 Foot Zone
Implementation of the Engineering Feasibility Plan	Within 30 calendar days of receipt of workplan approval

ATTACHMENT 1

ATTACHMENT 1
LIST OF FACILITY DOCUMENTS INCORPORATED
IN THE PERMIT BY REFERENCE
LAD 000 618 256
AI# 276

DOCUMENT TYPE	APPLICATION/ DOCUMENT DATE	ELECTRONIC DATABASE MANAGEMENT SYSTEM (EDMS) DOCUMENT ID NO.	COMMENTS
Closure Plan /Post-Closure Plan and Cost Estimates	March 27, 2008	36697895	Responses to Notice of Deficiency Vol. 2 Appendix K
Contingency Plan	March 27, 2008	36697895	Responses to Notice of Deficiency Vol. 2 Appendix G
Inspection Plan	March 27, 2008	36697895	Responses to Notice of Deficiency Vol. 2 Appendix F
Personnel Training Plan	March 27, 2008	36697895	Responses to Notice of Deficiency Vol. 2 Appendix H
Waste Analysis Plan	Sept. 1, 2002	23881877	RCRA Permit Renewal Application Vol. 4 Appendix F
Security Plan	March 27, 2008	36697895	Responses to Notice of Deficiency Vol. 2 Appendix E
Groundwater Sampling and Analysis Plan (GWSAP)	Dec. 13, 2007	36479634	Rev. Application as Responses to Notice of Deficiency Vol. 4 Appendix C
GWSAP (con't)	March 27, 2008	36697895	Responses to Notice of Deficiency Vol. 2 Appendix C
	April 4, 2008	36720977	Supplemental Responses to Notice of Deficiency of March 27, 2008

ATTACHMENT 1
LIST OF FACILITY DOCUMENTS INCORPORATED
IN THE PERMIT BY REFERENCE
LAD 000 618 256
AI# 276

Settlement Agreement	Dec. 13, 2007	36479634	Rev. Application as Responses to Notice of Deficiency Vol. 4 Appendix C
	March 27, 2008	36697895	Response to Notice of Deficiency Vol. 2 Appendix C (Section F)
	May 26, 2006	34258379	
Public Hearing Transcript	October 21, 2008	38692179	Public comments on Draft Post-Closure Permit (July 17, 2008)

RESPONSIVENESS SUMMARY

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 1

REFERENCE: RESTORE comments, dated January 30, 2008, on CECOS International, Inc. Hazardous Waste Post-Closure Permit Application.

ISSUE: Request for a Public Hearing

COMMENT: We demand a Public Hearing with the following items on the agenda:

1. 15 minute presentation by LDEQ to give a simple, graphic streamlined explanation of the permit process, with the last 5 minutes of that presentation to be devoted to explaining why it has taken so long to get apparently no farther along than we were 20 years ago.
2. 15 minute question and answer period in which audience members can pursue clarification on the above.
3. 15 minute presentation by LDEQ to give a frank overview of the chemical contamination that exists at and around the facility, with the last five minutes explaining why certain things have not yet been done despite promises that were made to the public in the past.
4. 15 minute question and answer period in which audience members can pursue clarification of the above.
5. 15 minute intermission to allow people to discuss things among themselves.
6. Unlimited time for comments from the audience.
7. Wrap up by LDEQ with commitment to have transcript of the hearing reviewed by all decision makers in Baton Rouge and at EPA Regional Headquarters in Dallas, with promise of quick and meaningful responses at both the permitting level and at the actual facility and its surroundings.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. The Waste Permits Division issued a letter dated May 19, 2008 responding to RESTORE's request for a public hearing by providing information concerning the public hearing process and information on the permitting process. A copy of the May 19, 2008 response letter is available on the Electronic Document Management System (EDMS) as Document Number 36878607.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 2

REFERENCE: RESTORE comments, dated January 30, 2008, on CECOS International, Inc. Hazardous Waste Post-Closure Permit Application.

ISSUE: Request for further investigation of the area between Pond 10 and the Little River.

COMMENT: I request a transect of borings and monitor wells all the way to Little River with chemical analysis to determine the degree and type of contamination that I believe must exist between Pond 10 and the Little River.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. The LDEQ will review all information concerning monitor well 71 and 74 (including well logs and sampling reports) and all boring data completed in the northeast corner. The Department will review all maps, piezometric information, borings and analyses from wells in the area (MW 71, 73, 74, 98 and PCU245).

Once the Department reviews all information (historical and current) concerning the area between Pond 10 and Little River, an anticipated determination concerning any further investigation of the Northeast Corner (the area between Pond 10 and Little River) will be made by the Department within 180 days of the effective date of the permit. Please see the responses provided in Item Nos. 3, 7, 21 and 23.

ACTION: No action to the permit is necessary at this time. The permit has not been revised.

RESPONSIVENESS SUMMARY

CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY HAZARDOUS WASTE POST-CLOSURE PERMIT LAD 000 618 256 AGENCY INTEREST NO. 276

ITEM: 3

REFERENCE: RESTORE comments, dated January 30, 2008, on CECOS International, Inc. Hazardous Waste Post-Closure Permit Application.

ISSUE: Volume 5, Figure 7 "Total Organics Isopleth Map Fourth Quarter 2006"

COMMENT: Monitor Well 74 beyond the east fenceline has 201 ppb organics and Monitor Well 71 beyond the fenceline has 46,597 ppb. Those wells are lateral to the slough that is in question yet they are picking up contaminants. There is simply no excuse for not exploring the surface, near surface, and intermediate layers of soil along the course that the wastes overflowed, to say nothing of no excuse for not analyzing the sediments in Little River at that location. Reinforcing our concern about the possible effects of ongoing contamination of Little River by poison springs or leachate from contaminated surface clays are the diagrams labeled "Time Series" for MW-74 showing a recent surge in total organics compared with past years, and similar surge in MW-71. The pulses are consistent with hydraulic interconnections between Little River and the screened sand layers at the well sites.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. Please see the responses provided in Item Nos. 2, 7, 21 and 23.

In addition, the spike or pulses in MW-74 can be attributed to significantly reduced groundwater recovery from recovery well MW-35. This lack of recovery has dated back to the fourth quarter 2004. This is approximately when MW-74 began to spike upward for total organics. MW-35 became inoperative in March 2006 following a period of declining groundwater recovery volumes. MW-35 was replaced in July 2007 with MW-35R which is located adjacent to MW-35. MW-35R was incorporated into the Shallow Pervious Zone recovery well network in November 2007. MW-35R has increased groundwater recovery volumes and overall recovery efficiency from this zone. Total organics have significantly been reduced

in this well as evidenced in the January 9, 2008 sampling event. MW-71 has also shown a marked decrease in total organics for the first quarter 2008 sampling event.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 4

REFERENCE: RESTORE comments, dated January 30, 2008, on CECOS International, Inc. Hazardous Waste Post-Closure Permit Application.

ISSUE: The time frame for the permitting process and the length of the permit.

COMMENT: It is almost incomprehensible that another six years have elapsed without these matters having been finalized. When we spoke in the 2002 meeting some of us pointed out that, at that time, we were waiting for a resolution of a 1998 application process, that in effect, had given the company four extra years without a final, controlling edict, or, as was interpreted by some of us, actually fourteen extra years. Now, adding six more years since 2002, we are up to twenty extra years.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. The Waste Permits Division issued a letter dated May 19, 2008 responding to RESTORE's concerns with the permitting process. The Department acknowledges that the application review for this facility has been long and complex, and that public comments can provide valuable information. RESTORE's continued interest in the review of the CECOS International, Inc. - Westlake Facility permitting process is appreciated. A copy of the May 19, 2008 response letter is available on the Electronic Document Management System (EDMS) as Document Number 36878607.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY HAZARDOUS WASTE POST-CLOSURE PERMIT LAD 000 618 256 AGENCY INTEREST NO. 276

ITEM: 5

REFERENCE: RESTORE (Michael Tritico) comments, dated October 21, 2008, on CECOS International, Inc. Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: Concerns about the thirty (30) year post-closure care period.

COMMENT: This Post-Closure Permit has within it a 30 year clock which began running in 1999. When that 30-year concept was proposed by other members of a committee I was on, (I believe that was in 1978). As we were being asked to write up recommendations for a State Hazardous Waste Management Plan, I objected strongly since I knew that there would be some situations that would be perpetual hazards, that 30 years was nothing when it came to the lifetimes of non-biodegradable toxins and the rates of flow of ground waters.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. The post-closure care period is for at least thirty (30) years, with permit renewal every ten (10) years or less. The post-closure period may be extended by the Administrative Authority when deemed necessary. Corrective action at the site must continue until concentration limits for all monitoring parameters listed in the permit have been achieved, and as otherwise required by the Administrative Authority. Therefore, the thirty (30) years will be extended until such time that the Administrative Authority determines the effectiveness of the post-closure care and as necessary to protect human health and the environment. The post-closure period includes monitoring and maintenance (i.e., manage a run-on and run-off control system to prevent erosion and other damage to the final cover, maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events). Please see responses provided in Item Nos. 14, 17, 19, 20, 26 and 31.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY HAZARDOUS WASTE POST-CLOSURE PERMIT

LAD 000 618 256

AGENCY INTEREST NO. 276

- ITEM: 6
- REFERENCE: RESTORE (Michael Tritico) comments, dated October 21, 2008, on CECOS International, Inc. Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.
- ISSUE: Concerns with the financial assurance for the facility and the cost for post-closure care.
- COMMENT: The company has budgeted \$10 million dollars for the remaining 21 years in the Post Closure period. That was based primarily on the costs for disposing of the 29,000 gallons/year of leachate from the old cells and the 544,000 gallons of recovered contaminants being brought up through the recovery wells. Since it is likely that the leachate will always be generated and it is unlikely that the recovery wells will ever quit bringing up contaminants unless they are turned off, when the \$10 million dollars runs out, where will the continuing source of money come from, assuming that the leachate and recovered groundwater is still to be collected and disposed of?
- The three financial assurance devices listed in Appendix L for the Post Closure period, a Performance Bond, and Irrevocable Standby Letter of Credit, and a Certificate of Liability Insurance, each seem to have a one-year duration, renewable or not renewable at the end of year's contract. Given the current collapse of the banking and insurance industries, what would happen if the particular banks and insurance companies involved in the Willow Springs site were to cave in and be required to not renew the financial assurance? If it were not to happen this go-around, since a bailout seems to be in the works, what if it happens later, when there might not be the public money or taxpayer will to bail out the financial assurance groups?
- What financial assurance devices exist for the Post-Post Closure era?
- LDEQ RESPONSE: The LDEQ acknowledges the above comment. The LDEQ is in receipt of a certificate of liability insurance, an Irrevocable Letter of Credit and a Surety bond. The financial responsibilities of the CECOS International, Inc. – Westlake Facility are required under LAC 33:V.Chapter 33 (3307

financial assurance for corrective action at regulated units and 3322 financial assurance for site-wide corrective action) and LAC 33:V.Chapter 37 (3301.B financial assurance for post-closure). During the active life of the Facility, financial assurance is updated annually. Cost estimates are also adjusted and reviewed annually by the Department. Regulatory provisions for the incapacity of owners or operators, guarantors, or financial institutions are addressed in LAC 33:V.3717.B. In the event a legal entity providing financial assurance declares bankruptcy or is otherwise unable to provide the security document, the Permittee must replace the financial security in accordance with the regulations.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 7

REFERENCE: RESTORE (Michael Tritico) comments, dated October 21, 2008, on CECOS International, Inc. Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: The hydraulic containment of contaminated groundwater in all affected zones.

COMMENT: The following sentence is without factual basis: “Hydraulic containment of contaminated groundwater in all affected zones has been achieved.” A transect of borings with chemical analyses and installation of monitor wells is needed along that transect between the Northeast Corner of the site and the Little River. Evidence warranted imposition of a requirement that borings and analyses be done to determine how much surface overflow contamination had saturated the route between Pond 10 and the river. No piezometers or monitor wells in the gap between Monitor Wells 73 and 74, 98 and PCU245.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. Please see responses provided in Item Nos. 2, 3, 7, 21, and 23 for more information concerning this comment.

Hydraulic containment of groundwater has been achieved in this area. Noted in the ground water quarterly reports are potentiometric maps for each monitored zone. In each zone it is clearly shown that containment of groundwater has been achieved. Each quarter water level measurements are taken and this data is used to generate these maps. The transect of borings, proposed by the EPA, when regulatory authority for HSWA was with EPA, would not alter the fact that hydraulic containment has been achieved. This transect, if performed, would determine if contamination was present in soils above or in the Shallow Silt Zone, located in this area. It would also help confirm whether or not the “shale out” indicated in the Shallow Zone Northeast Corner is present as shown. If contamination was found to be present in the shallow silt zone between MW-73 and MW-98, the recovery well system would not change. Hydraulic containment would exist as it is now.

There were borings drilled during the RFI process which was completed in December 1995. Two borings were located along the facility's east boundary just north of MW-71 in the Northeast corner of the facility. These two borings, designated as L-313 and L-314, show the "shale out" of the "Shallow Silt" in this area. With recovery wells MW-35R, MW-36R, and MW-30 pumping in their present location there is no indication that additional monitor wells located in the "shale out" would improve upon the present cone of depression created by these three recovery wells.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 8

REFERENCE: RESTORE (Michael Tritico) comments, dated October 21, 2008, on CECOS International, Inc. Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: Concerns about Monitor Well 27 and Monitor Well 50.

COMMENT: "I have asked for and I ask again that as close to the injection well as possible be placed a new monitor well (with chemical analyses of the material that comes up during its construction so as to determine what concentrations of which contaminants occur at what depths)."

The monitor well nearest the injection well (MW-27) has high readings of contamination. The well should be screened at a depth sufficiently below the base of any contamination found so that we can be assured that the injection well is not the source of contamination and that should any contamination come up from below that it is quickly detected. Monitor Well 50 is too far away to quickly detect any contamination coming up around the casing. It may be upgradient from the flow of groundwater at the depths that lie between the base of the USDW and the injection zone.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. However, the Louisiana Department of Natural Resources (DNR), Office of Conservation, Injection and Mining Division has regulatory authority over the injection well at the CECOS International, Inc. – Westlake Facility. The following website may provide contact and useful information.
<http://dnr.louisiana.gov/cons/CONSERIN/Conserin.ssi>.

Monitor wells MW-17, 18, and 53 are all screened within the "200-Foot Zone". They are located northwest of the injection well. Sample results from these three wells have consistently demonstrated an absence of any contamination. This is an indication that contamination in the "50-Foot Zone" is separate and not apart of any contamination that might be seeping up from the injection well, otherwise these wells would, by all accounts, exhibit some contamination that may or may not be from a deeper source.

The Department of Natural Resources uses a radioactive tracer survey annually to detect any leaks that may occur from the casing or from cement plugs placed in the annulus of the well. In addition, the LDNR performs a mechanical integrity test of the casing four times a year. Both these tests are designed to detect any leakage that may occur from potentially cracked casing or compromised cement placed in the annulus of the well. These tests would detect leakage much quicker than a monitor well located adjacent to the well.

MW-50 and any additional monitor wells proposed for injection well monitoring are associated with the injection well permit and comments should be addressed during the injection well permit renewal process scheduled in March 2012.

Further, monitor wells used to monitor injection wells are primarily designed to detect any vertical migration that may occur via interconnection of sands that may act as a conduit for injected waste in saltwater sands that may migrate upward to the base of the fresh water sand. They are not designed to monitor potential leaks from casing and compromised cement in injection wells. The injection well injects waste just below 4100 feet. The primary function of MW-50 is to monitor the base of the fresh water aquifer so as to detect any potential injected waste migrating upward from 4100 feet to 1160 feet (the screened interval of MW-50 and the approximate base of the fresh water sand). This would alert the Department that the base of the fresh water aquifer is being affected by injected waste and appropriate actions would have to be taken in order to protect all shallower fresh water sands. Please see responses provided in Item Nos. 18, 21, 24 and 27.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 9

REFERENCE: RESTORE (Michael Tritico) comments, dated October 21, 2008, on CECOS International, Inc. Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: Removal of the sources of contamination.

COMMENT: According to my rough, very rough, calculations, there has to be at least 10 cubic acres of contamination beneath the 80 acre site. Before the contamination had saturated to depths below the 50 foot zone, some of us had begged that the sources be removed. That was not done and now the field of contamination is far greater than it would have been. Would it not still be the prudent thing to do to at least excavate and remove the 665,000 cubic yards of highly-concentrated toxic and corrosive materials in the old closed landfill cells?

LDEQ RESPONSE: The LDEQ acknowledges the above comment but does not concur.

CECOS submitted a Remedial Action Plan on May 29, 1984 that evaluated options for remedial actions at the facility. Twenty-six potentially-viable alternatives were evaluated in the May 29, 1984 Remedial Action Plan to address areas that had experienced impacts associated with old unlined impoundment areas that were identified to be the source of impacts. The potentially-viable alternatives were grouped into three functional categories: 1) Removal; 2) Containment; and 3) Treatment.

The Remedial Action Plan evaluated sixteen (16) potentially-viable alternatives for the 50-Foot Zone and ten (10) potentially-viable alternatives for the Shallow Pervious Zone.

After carefully evaluating the potentially-viable alternatives, the selected remedial actions identified in the May 29, 1984 Remedial Action Plan were placement of a clay cap on old unlined impoundment areas combined with drainage improvements and groundwater collection using wells screened in the 50-Foot Zone, plus clay cap in the northeast corner area combined with drainage improvements and groundwater collection using

wells screened in the Shallow Pervious Zone. Capping the old unlined lagoon areas reduced or eliminated future infiltration from precipitation, drainage improvements enhanced the movement of stormwater runoff, and groundwater collection provided contaminant removal along with hydraulic control.

While excavation of residual materials was considered in the 1984 Remedial Action Plan, such a procedure was deemed not feasible due to unnecessary health and safety risks and cost prohibitive because of: exposure of residual materials and soils; the volume of excavated materials and soils that would be necessary; handling of excavated materials and soils; and transportation and secondary disposal. For the present, such a procedure does not directly address groundwater impacts and would disrupt the effectiveness of the current remedial system in place.

The only permeable zone beneath the "50-Foot Zone" is the "200-Foot Zone". This zone is being monitored via series of monitor wells that screen the upper and lower "200-Foot Zone". To date no verified contamination has been found in these wells, confirming that no contamination is present below the "50-Foot Zone" at this time.

ACTION:

No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. - WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 10

REFERENCE: RESTORE (Michael Tritico) comments, dated October 21, 2008, on CECOS International, Inc. Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: The use of EDC and toluene as the indicator chemicals for assessing the spread of the plumes of contamination. Perchloroethylene actually moves faster. Trichlorofluoromethane or Freon are even faster trackers.

COMMENT: I would like to see trichlorofluoromethane added to Table G.2.

LDEQ RESPONSE: The LDEQ acknowledges the above comment.

Trichlorofluoromethane is included in the list of analytes in method 8260B. CECOS uses this method when analyzing for volatile organics. To date, trichlorofluoromethane has not been detected in groundwater samples collected from monitoring wells at this site. If this constituent is found then it will be reported as required by the regulations.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 11

REFERENCE: RESTORE (Michael Tritico) comments, dated October 21, 2008, on CECOS International, Inc. Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: Page 33, the compliance levels applied only to the “uppermost permeable zone.”

COMMENT: Page 33 gave me the impression that those compliance levels applied only to the “uppermost permeable zone.” I would hope that they also apply to all permeable zones.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. The Table G.2 concentration limits apply to all wells on site and all zones monitored.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 12

REFERENCE: RESTORE (Michael Tritico) comments, dated October 21, 2008, on CECOS International, Inc. Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: Concerns with the redesignation of wells and plugged and abandoned wells. Too much relief from monitoring and analyses is being given.

COMMENT: There should not be a wholesale redesignation of monitor wells to piezometers which do not have to be sampled and analyzed for chemical contaminants, nor plugged and abandoned wells unless there is a certainty that they will not be useful in covering areas formerly monitored. What if there is resumption of migration in areas thought to have been brought under control. "There were several things that made me worry that too much relief from monitoring and analyses is being given to the company.

LDEQ RESPONSE: The LDEQ acknowledges the above comment.
The Department and CECOS International, Inc./Allied Waste Services have had several meetings to discuss changes to the recovery system to make it more efficient. Some of the changes made are in the best interest of enhancing recovery of contaminated groundwater onsite. Certain recovery wells, for example MW-46, no longer serve their initial purpose. This particular well recovers clean groundwater and only interferes with the efficient recovery of the plume. It draws groundwater away from the center of the cone of depression, the area where greatest contamination is observed. Other wells, namely those located on the western side of the facility have been clean for some time now and no longer serve any purpose. This series of wells have been historically outside of the plume and have never encountered any contamination. These wells will be plugged and abandoned.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 13

REFERENCE: RESTORE (Michael Tritico) comments, dated October 21, 2008, on CECOS International, Inc. Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: Page 48, "After the Permittee is relieved from continuous pumping of this system," (the leak detection system for Phase III of Cell 7), the sampling frequency will be reduced...

COMMENT: Why would a leak detection system not always be kept operational?

LDEQ RESPONSE: The LDEQ acknowledges the above comment.

The leak detection system is utilized to see if any leachate is leaking from the piping system for the leachate collection system. If liquids are present in the leak detection system then this indicates that the leachate collection system is leaking. It is liquids from the leak detection system that will be continuously pumped until all liquid is removed. When all liquids are removed from pumping, then sampling of this system will go from a quarterly sampling schedule to a semi-annual schedule. If liquids are found during a semi-annual sampling event, then pumping will recommence and continue until all liquids are removed and sampling will revert back to the quarterly schedule.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 14

REFERENCE: RESTORE (Michael Tritico) comments, dated October 21, 2008, on CECOS International, Inc. Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: Concerns with the concept of compliance for three years in a row allowing relief from further monitoring and control actions.

COMMENT: "Very confusing to me was the concept of compliance for three years in a row allowing relief from further monitoring and control actions.

To presume that there could not be a strong pulse of something after three years of absence is a mistake at a place like Willow Springs.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. As stated in LAC 33:V.3313.C, if the owner or operator is engaged in a corrective action program at the end of the compliance period specified in Subsection A of this Section, the compliance period is extended until the owner or operator can demonstrate that the groundwater protection standard of LAC 33:V.3305 (Table G.2) has not been exceeded for a period of three consecutive years. The compliance period as stated in Subsection A of this regulation is the number of years equal to the active life of the waste management area (including any waste management activity prior to permitting, and the closure period). The facility is engaged in a corrective action program that will continue after the post closure period of 30 years has expired, if constituents in groundwater are still above Table G.2 concentration levels. When and if, all on-site monitor wells have exhibited concentrations that are below the listed Table G.2 concentrations for a period of three consecutive years then the compliance period shall meet the requirement of LAC 33:V.3313.C. The Department will, at that time, make a determination of whether the compliance period will be extended. Please see responses provided in Item Nos. 5, 17, 19, 20, 26, and 31.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY HAZARDOUS WASTE POST-CLOSURE PERMIT LAD 000 618 256 AGENCY INTEREST NO. 276

ITEM: 15

REFERENCE: RESTORE (Michael Tritico) comments, dated October 21, 2008, on CECOS International, Inc. Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: The concept that instantaneous compliance once a level from Table G.2 has been achieved.

COMMENT: Page 66-67 raised an even greater concern, that maybe there is such a thing as instantaneous compliance once a level from the G.2 table has been achieved. I hope that is not the case.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. However, there is no regulation that specifies “instantaneous compliance”. Please see the response provided in Item No. 14.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 16

REFERENCE: RESTORE (Michael Tritico) comments, dated October 21, 2008, on CECOS International, Inc. Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: No Corrective Action Program Wells in the 200-Foot Zone.

COMMENT: Page 73, says that "Presently there are no 200-Foot Zone Corrective Action Program Wells." If the contaminants once made it into the 200-Foot Sand then it would be almost impossible to retrieve them. I suppose that is why there are no such recovery wells?

LDEQ RESPONSE: The LDEQ acknowledges the above comment. There are no Corrective Action Program wells in the 200-Foot Zone since there is no contamination currently in the 200-Foot Zone. Please see responses provided in Item Nos. 28 and 29.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 17

REFERENCE: Ms. Pam Tynes' public comments from the October 21, 2008 public hearing for CECOS International's Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: CECOS not making a presentation at the public hearing and the Facility being responsible for the contamination.

COMMENT: Why is BFI not presenting any statement about what they are doing?

Will they still be responsible forevermore for any damages to water, land, person or air?

LDEQ RESPONSE: The LDEQ acknowledges the above comment. The Facility (CECOS International, Inc./Allied Waste) has the option, under the public hearing guidelines, to make a statement and/or presentation or they can also elect not to do so.

Post-closure permits are normally required for a minimum of thirty (30) years after closure. The post-closure period may be extended based on site-specific conditions. The Administrative Authority may extend the post-closure care period beyond the thirty (30) year minimum to protect public health and the environment and for the site as long as the wastes pose a threat to water quality. Corrective action at the site must continue until concentration limits for all monitoring parameters listed in the permit have been achieved, and as otherwise required by the Administrative Authority. The post-closure period includes monitoring and maintenance (i.e., manage a run-on and run-off control system) to prevent erosion and other damage to the final cover, maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events. Please see the responses provided in Item Nos. 5, 14, 19, 20, 26 and 31.

In addition, the Administrative Authority retains the authority to extend the post-closure care period and the corrective action program to protect human health and the environment.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 18

REFERENCE: Mr. Herbert Rigmaiden's public comments from the October 21, 2008 public hearing for CECOS International's Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: Concerns with the injection well and groundwater contamination at the CECOS Facility.

COMMENT: The CECOS Facility is located over one of our main water aquifers for Calcasieu. I am concerned with the pumping of large amounts of chemicals down the injection well in one place and the movement of these chemicals.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. However, the Louisiana Department of Natural Resources (DNR), Office of Conservation, Injection and Mining Division has regulatory authority over the injection well at the CECOS International, Inc. – Westlake Facility. The following website may provide contact and useful information.
<http://dnr.louisiana.gov/cons/CONSERIN/Conserin.ssi>.

There are thirty (30) monitor wells monitoring the 200-Foot Zone and the upper and lower Chicot Aquifer beneath the site. The established groundwater monitoring system consists of an adequate number of wells to detect any contamination that may or may not migrate into this zone. Please see responses provided in Item Nos. 8, 21, 24, 27, 29 and 30.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY HAZARDOUS WASTE POST-CLOSURE PERMIT LAD 000 618 256 AGENCY INTEREST NO. 276

ITEM: 19

REFERENCE: Mr. Charlie Atherton's public comments from the October 21, 2008 public hearing for CECOS International's Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: Concerns with groundwater contamination and the contamination of local water wells and the 30-year post-closure care timeframe.

COMMENT: In the past, water from local wells had a color and odors of concern. I don't know that that was ever addressed. I am concerned about the 30-year post-closure timeframe and what will happen at the end of 30 years. I am concerned about the continued responsibility of the Company for the contamination.

I am requesting a proper delineation of the contamination and proper monitoring of all of the water zones and water bodies, including the river.

I request that the permit insures that the Company will never be able to walk off from the site.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. The Department is not aware of any data on the contamination of local water wells.

Post-closure permits are normally required for a minimum of thirty (30) years after closure. The post-closure period may be extended based on site-specific conditions. The Administrative Authority may extend the post-closure care period beyond the thirty (30) year minimum to protect public health and the environment and for facilities/units as long as the wastes pose a threat to water quality. Corrective action at the site must continue until concentration limits for all monitoring parameters listed in the permit have been achieved, and as otherwise required by the Administrative Authority. The post-closure period includes monitoring and maintenance (i.e., manage a run-on and run-off control system to prevent erosion and other damage to the final cover, maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events). Please see the responses provided in Item Nos. 5, 14, 17, 20, 26

and 31.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 20

REFERENCE: Ms. Peggy Franklin's public comments from the October 21, 2008 public hearing for CECOS International's Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: The potential for the Company to abandon the site and the laws and regulations that are provided to prevent this from happening.

COMMENT: Is there a law that has been passed or maybe regulations passed that if waste has been landfilled that it cannot be abandoned? Is the responsible party responsible for it for life? Is BFI/CECOS grandfathered in under the law/regulations, or will this apply to them also?

RESPONSE: The LDEQ acknowledges the above comment. Please see the responses provided in Item Nos. 5, 14, 17, 19, 26 and 30.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 21

REFERENCE: Mr. Ernest Colonna's public comments from the October 21, 2008 public hearing for CECOS International's Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: Concerns with proper or adequate distribution of monitoring wells downgradient to the site.

COMMENT: I do not know whether there is a proper or adequate distribution of monitoring wells downgradient to the site to monitor the Chicot Aquifer and the Evangeline Aquifer. I ask that the permit reflect a proper distribution of wells downgradient from the site to determine the migration of materials leaving the site.

My primary concern is to determine any and all migration of hazardous materials migrating from the site, particularly toward the south. Our aquifer moves from the north to the south. Any and all integrations of our drinking water from the 80, 200, 500, and 700 foot sands need to be adequately addressed by this permit process, and also the Evangeline Aquifer that lies below it.

One of the other issues of primary concern is the northeast corner of the site, where it has been reported that materials leaving the pits are migrating into the Little River.

One of my primary concerns is the injection well and the material that had been pumped into the ground would not migrate offsite for 10,000 years, although there were never any borings or log information sustained by the history of the site that proves that there are any zones below ground that are impervious to migration. They are still using it to inject materials that are not tested for toxicity in the injection well, and I think that is a major issue that needs to be raised.

LDEQ RESPONSE: The LDEQ acknowledges the above comment.

The Department considers the current placement of monitor wells in all three monitored zones (NE Shallow Silt, the 50-Foot, and the 200-Foot Zones) adequate to detect any migrations downgradient from the plume.

The Evangeline Aquifer below the CECOS-Westlake Facility exists as saltwater sand (Department of Conservation Louisiana Geological Survey, Water Resources Bulletin No. 10, October 1967).

Concerning the Northeast Corner of the site, again please see the responses provided in Item Nos. 2, 3, 7 and 23.

Please see the response provided in Item No. 8 concerning your comments that pertain to the injection well. The Louisiana Department of Natural Resources (DNR), Office of Conservation, Injection and Mining Division has regulatory authority over the injection well at the CECOS International, Inc. – Westlake Facility. The following website may provide contact and useful information.
<http://dnr.louisiana.gov/cons/CONSERIN/Conserin.ssi>.

The wastes accepted for disposal in the injection well are subject to the requirements in the operating permit for the CECOS Facility and will be addressed in the operating permit and in the waste analysis plan.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY HAZARDOUS WASTE POST-CLOSURE PERMIT

LAD 000 618 256

AGENCY INTEREST NO. 276

ITEM: 22

REFERENCE: Mr. Michael Tritico's public comments from the October 21, 2008 public hearing for CECOS International's Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: Concerns with monitoring well 71 and the Northeast Corner of the Facility.

COMMENT: I noticed that monitor well 71, for example, which is right on the fence line in the northeast corner, has 60,000 parts per billion of trichloroethane. Now what that tells me is that I'm right in my written comments to be extremely concerned about the northeast corner. The point of compliance line is not at the fence line. It's conveniently drawn out beyond the fence line. There is a monitor well out in the direction, off the property, and it too has trichloroethane in it, but I'm wondering why the points of compliance are not the fence line. Why not the property line? Why go out in the neighborhood to draw a point of compliance line?

LDEQ RESPONSE: The LDEQ acknowledges the above comment.

The Northeast Corner is considered an Area of Concern (AOC) and is defined by the use and location of monitor wells; therefore the Point of Compliance is defined by the existing monitor wells. Some units are defined by the visible surface extent, such as known impoundments. The Point of Compliance for these units is defined by the boundaries of the unit or impoundment.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 23

REFERENCE: Mr. Michael Tritico's public comments from the October 21, 2008 public hearing for CECOS International's Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: Transect of borings between the northeast corner of the site, where pond 10 used to overflow, and the Little River.

COMMENT: I'm asking that the promise be fulfilled. When Steve Slayton was the EPA person who began to implement the new law called RCRA, he called for a RCRA Facility Investigation (RFI) that included many things, some of which haven't been done. But the critical one in the northeast corner has never been done, that was a transect of borings between the northeast corner of the site, where pond 10 used to overflow, and the Little River. Pond 10 used to catch the stuff that was overflowing from the upper ponds. We could see the upper ponds flowing down, cascading down into the last pond, which was supposed to be pure rainwater.

The Applicant has supplied, contours showing ground water flow directions, and you will see contours showing the EDC concentrations, but you will see there is a notch, and there's a major extrapolation in those two maps that is company friendly, without borings, without monitoring wells, without piezometers. There's no monitor well between 71 and 98 or 71 and 74. It's a big data gap.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. Please see the responses provided in Item Nos. 2, 3, 7, and 21.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 24

REFERENCE: Mr. Michael Tritico's public comments from the October 21, 2008 public hearing for CECOS International's Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: A monitor well closer to the injection well.

COMMENT: Another thing I think should be done is a monitor well closer to the injection well. Monitor well 27, the one nearest to the injection well, has always shown high levels of contamination.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. Please see the responses provided in Item Nos. 8, 18, 21 and 27.

The Louisiana Department of Natural Resources (DNR), Office of Conservation, Injection and Mining Division has regulatory authority over the injection well at the CECOS International, Inc. – Westlake Facility. The following website may provide contact and useful information.
<http://dnr.louisiana.gov/cons/CONSERIN/Conserin.ssi>.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 25

REFERENCE: The LDEQ's comments and revisions concerning the CECOS International, Inc. Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: Permit Conditions VI.F.5, VI.F.8, VI.F.8.a, VI.G.1.a.vii, VI.H.1 and .G.2.

COMMENT: To make grammatical corrections to indicator parameters for groundwater analysis.

LDEQ RESPONSE: Permit Conditions VI.F.5, VI.F.8, VI.F.8.a, VI.G.1.a.vii, VI.H.1 and Table G.2 have been revised to remove cis-1,2-dichloroethane (EDC) and trans-1,2-dichloroethane (EDC) as indicator parameters.

ACTION: Permit Conditions VI.F.5, VI.F.8, VI.F.8.a, VI.G.1.a.vii, VI.H.1 and Table G.2 were revised to "1,2-dichloroethane (EDC)."

RESPONSIVENESS SUMMARY

CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY HAZARDOUS WASTE POST-CLOSURE PERMIT LAD 000 618 256 AGENCY INTEREST NO. 276

ITEM: 26

REFERENCE: Ms. Pam Tynes' public comments from the October 21, 2008 public hearing for CECOS International's Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: That CECOS International, Inc./Allied Waste continue to be responsible for the corrective action at the Westlake Facility.

COMMENT: I want forevermore responsibility of BFI for everything that's gone on beforehand with regard to everything that's been done there.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. Please see the responses provided in Item Nos. 5, 14, 17, 19, 20 and 31.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 27

REFERENCE: Mr. Herbert Rigmaiden's public comments from the October 21, 2008 public hearing for CECOS International Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: The pumping of chemicals down the injection well.

COMMENT: I think EPA needs to take a look at the pumping of all those chemicals down underneath the ground.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. Please see the responses provided in Item Nos. 8, 18, 21 and 24.

The Louisiana Department of Natural Resources (DNR), Office of Conservation, Injection and Mining Division has regulatory authority over the injection well at the CECOS International, Inc. – Westlake Facility. The following website may provide contact and useful information.
<http://dnr.louisiana.gov/cons/CONSERIN/Conserin.ssi>.

The wastes accepted for disposal in the injection well are subject to the requirements in the operating permit for the CECOS Facility and will be addressed in the operating permit and in the waste analysis plan.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY HAZARDOUS WASTE POST-CLOSURE PERMIT LAD 000 618 256 AGENCY INTEREST NO. 276

ITEM: 28

REFERENCE: Mr. Charlie Atherton's public comments from the October 21, 2008 public hearing for CECOS International's Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: The concern is that presently there are no 200 Foot Zone corrective action program wells and the request for delineation of the ground water for contamination.

COMMENT: Page 73 of the Permit. Presently there are no 200 Foot Zone corrective action program wells. So, that's one of the reasons for the stress on complete and total delineation of the ground water for contamination. Obviously, if there's some found, then corrective remediation should take place.

I ask that the DEQ go back to past public hearings and review the comments that were given because they will give you a good history of what you're going to be dealing with in the future.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. Please see the responses provided in Item Nos. 16 and 29.

The LDEQ has reviewed all technical information, all historical information (including but not limited to past public comments) and all current information concerning the CECOS International, Inc. – Westlake Facility.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 29

REFERENCE: Mr. Ernest Colonna's public comments from the October 21, 2008 public hearing for CECOS International's Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: The site sits on top of the Chicot Aquifer, the sole source of drinking water for the area.

COMMENT: Our primary source of water comes from the Chicot and this site sits on top of the Chicot and it is a major concern for me...also for our drinking water. It's our sole source of drinking water.

I am asking that the previous hearings and historical information about this site be reviewed to gain a particular insight, a three-dimensional understanding of what this site is about.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. Please see the responses provided in Item Nos. 18, 21 and 30.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY HAZARDOUS WASTE POST-CLOSURE PERMIT

LAD 000 618 256

AGENCY INTEREST NO. 276

ITEM: 30

REFERENCE: Mr. Paul Ringo's public comments from the October 21, 2008 public hearing for CECOS International's Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: The site sits on top of the Chicot Aquifer, the sole source of drinking water for the area.

COMMENT: Our primary source of water comes from the Chicot and this site sits on top of the Chicot and it is a major concern for me also for out drinking water. It's our sole source of drinking water.

I am asking that the previous hearings and historical information about this site be reviewed to gain a particular insight, a three-dimensional understanding of what this site is about.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. Please see the responses provided in Item Nos. 18, 21, and 29.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 31

REFERENCE: Ms. Mary Ellendar's public comments, dated October 24, 2008, on CECOS International's Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: The responsibility of BFI/CECOS liability for the site should not expire in thirty (30) years.

COMMENT: BFI/CECOS should not be allowed to avoid "potential and real environmental effects, balancing of social and economic benefits against impact losses and alternative sites, projects and mitigative measures.

There should not be a time prescription for BFI/CECOS' liability with this impending health catastrophe.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. Please see the responses provided in Item Nos. 5, 14, 17, 19, 20 and 26. Please see the "Fact Sheet" in the Draft Hazardous Waste Post-Closure Permit dated July 17, 2008 for the "IT" Analysis.

ACTION: No action to the permit is necessary. The permit has not been revised.

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 32

REFERENCE: CECOS International's comments, dated October 24, 2008, on CECOS International's Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: The wording on of the signature page concerning post-closure care period

COMMENT: The second page of the draft Post-Closure permit cover letter, which has a signature placeholder for Cheryl Sonnier Nolan, Assistant Secretary, Louisiana Department of Environmental Quality (LDEQ) states, "The post-closure care period for the permitted units, which are subject to the requirements of LAC 33:V.3519 through 3527, including monitoring and maintenance, will be in effect for at least thirty (30) years, unless extended by the Administrative Authority".

CECOS would like to clarify that the post-closure care period for the permitted units subject to the requirements of LAC 33:V.3519 through 3527, including monitoring and maintenance, will be in effect for at least thirty (30) years after closure, unless extended by the Administrative Authority. The addition of the words "after closure" will more clearly acknowledge the closure dates for various units described in the Closed Areas Post-Closure Permit application, identified in Sections IV of the draft Post-Closure Permit, and reiterated below:

- Landfill Cell 7: Stopped receiving waste prior to 1988. Referred to in a November 1999 LDEQ inspection letter as "closed."
- pH Adjustment Basins, Equalization Basin, and Mixing Basins: Certified closed in 1997.

Similar changes may be appropriate in other sections of the Post-Closure Permit, including but not limited to Section II.B Effect of Permit, 1st paragraph, and Section V. Permit Conditions Applicable to the Permitted Closed Post-Closure Units.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. Language concerning the start or beginning of the post-closure care period for the permitted units

has been added to the permit. As stated in the permit application dated December 2007, the Impoundments were closed and began post-closure care in 1999 and the landfill cells were in post-closure care no later than 1999 based on the November 16, 1999 LDEQ Inspection Letter.

ACTION:

Permit Signature Page, has been revised to state "The post-closure care period for the permitted units, which are subject to the requirements of LAC 33:V.3519 through 3527, including monitoring and maintenance, will be in effect for at least thirty (30) years, unless extended by the Administrative Authority. The post-closure care period for the permitted units began November 1999."

Section II.B has been revised to state "This permit authorizes the Permittee to conduct post-closure care and corrective action for a period of no less than thirty (30) years, monitor groundwater, and conduct corrective action for groundwater contamination in accordance with the conditions of this permit, unless the permit is amended by the Administrative Authority. The post-closure care period for the permitted units began November 1999."

Section V has been revised to state "The post-closure care period will be in effect for the period of thirty (30) years, unless extended or shortened by the Administrative Authority, as specified in LAC 33:V.3521.A.1 and 2. The post-closure care period for the permitted units began November 1999."

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 33

REFERENCE: CECOS International's comments, dated October 24, 2008, on CECOS International's Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: The status of Pond 10 as a solid waste management unit (SWMU) and its inclusion in the post-closure permit.

COMMENT: The draft Post-Closure Permit includes Pond 10 as a solid waste management unit (SWMU) that was used to store and dispose of hazardous wastes. Pond 10 was not a SWMU used to store and dispose of hazardous wastes. As represented by CECOS in the information submitted under cover letter dated October 24, 2008, Pond 10 was used only as a stormwater retention pond, as confirmed by interviews with site operations personnel, by previous permits issued by the US Environmental Protection Agency and State of Louisiana, by testing of waters contained in the pond, by testing of sediments below the pond, and by decommissioning methods approved by the LDEQ predecessor Agency. Various Sections of the draft Post-Closure Permit should be revised to delete references to Pond 10 as a SWMU to the Permit, including but not necessarily limited to Section VI.A.

The draft Post-Closure Permit also requires that the facility include Pond 10 as a SWMU requiring corrective action (Section II.E.26.d). Because Pond 10 was never a SWMU, as clearly demonstrated in Attachment 1 and as confirmed through LDEQ and its predecessor Agency actions and approvals, CECOS requests that Section II.E.26.d and any other related Sections that discuss Pond 10 as a SWMU be deleted from the final Permit.

Section II.E.26.e requires that the facility submit clean closure documentation for Pond 10. As described above and as detailed in Attachment 1, Pond 10 was not considered by LDEQ, its predecessor Agency, or USEPA to be a SWMU and LDEQ approved the closure of Pond 10 by cutting through the berm and allowing the water from Pond 10 to flow into Little River, given pond water sampling results that indicated it was appropriate to do so. It is not now possible for CECOS to produce

the requested scope of clean closure documentation for Pond 10 because the LDEQ and its predecessor Agency did not consider Pond 10 to be a SWMU and therefore approved closure procedures that were based on non-hazardous methods as appropriate given its use. CECOS requests that Section II.E.26.e and any other related Sections that discuss Pond 10 clean closure be deleted from the final permit.

LDEQ RESPONSE: The LDEQ acknowledges the above comment. Permit Conditions II.E.26.d and II.E.26.e have been removed. However, all closed areas/units/areas of concern (including Pond 10) remain subject to site-wide corrective action and groundwater protection standards.

Permit Condition VI.A has been revised to clarify its applicability to those areas used to store and dispose of hazardous waste and to areas currently involved in site-wide corrective action.

ACTION: Permit Condition II.E.26.d and Permit Condition II.E.26.e have been removed from the Schedule of Compliance.

Permit Condition VI.A has been revised to state "The regulations of LAC Title 33, Part V, Chapters 5, 15, 25, 29, 33, 35, and Louisiana's Water Control Law, R.S. 30:2076 of the Environmental Quality Act, R.S. 30:2001 et seq, and provisions of this permit shall apply to groundwater protection programs for areas identified below that are/were used to store and dispose of hazardous wastes and/or are areas currently involved in site-wide corrective action. All requirements and conditions of this permit shall apply to all applicable areas including compliance, corrective action and post-closure care periods until the concentration limits listed in Table G.2 have been achieved, or as required by the Administrative Authority".

RESPONSIVENESS SUMMARY

**CECOS INTERNATIONAL, INC. – WESTLAKE FACILITY
HAZARDOUS WASTE POST-CLOSURE PERMIT
LAD 000 618 256
AGENCY INTEREST NO. 276**

ITEM: 34

REFERENCE: The LDEQ's comment on CECOS International's Draft Hazardous Waste Post-Closure Permit dated July 17, 2008.

ISSUE: Clarification on the re-characterization of waste.

COMMENT: The LDEQ should clarify the language in III.B.3 pertaining to requirements for annual re-characterization of waste.

LDEQ RESPONSE: The LDEQ acknowledges the need to revise the language in Permit Condition III.B.3. Specifically, the requirement for re-characterization of all groundwater samples has been removed.

ACTION: Permit Condition III.B.3 has been revised to state "The Permittee shall, at a minimum, annually re-characterize all hazardous waste streams shipped off-site or treated on-site."